Q-5004-001
July 30, 2025

Mr. Rick Chellman, Planning Board Chair
City of Portsmouth Planning & Sustainability Department
1 Junkins Avenue
Portsmouth NH, 03801

Re: Request for Site Plan Review, & Conditional Use Permits
Proposed Bank Pad, 1465 Woodbury Ave, Portsmouth, NH

Dear Chairman Chellman,

On behalf of Bromley-Portsmouth, LLC & RCQ-Portsmouth, LLC c/o Quincy & Company, Inc. (owner/applicant), we are pleased to submit one (1) set of hard copies and one electronic file (.pdf) of the following information to support a request for a Site Review Permit and Conditional Use Permits for the above referenced project.

- One (1) 22x34 & one (1) 11x17 copy of the Site Plan Set, revised July 30, 2025;
- Owners Authorization, dated June 4, 2025
- TAC Conditions Response Tracker, dated July 30, 2025;
- Drainage Analysis, dated June 16, 2025;
- Long-Term Operation & Maintenance Plan, dated June 16, 2025;
- Open Space Exhibit, dated July 30, 2025;
- Community Space Exhibit, dated July 30, 2025;
- Community Space Site Plan
- Plaza Master Planting Plan
- Green Building Statement, dated June 13, 2025;
- Traffic Impact Study, dated June 25, 2025;
- Site Review Checklist, dated July 30, 2025;
- Building Renderings

PROJECT SUMMARY

Existing Conditions

The proposed project is located at 1465 Woodbury Ave, which is identified as Map 216 Lot 3 on the City of Portsmouth Tax Maps. The site currently functions as a significant retail hub and features a variety of co-tenants, including major retailers such as Market Basket, Marshalls, Burlington, Panera Bread, and Wendy's, among others. The property is a 19.76-acre parcel of land that is located in the Gateway District (G1). The property is bound to the southwest & southeast by Woodbury Ave, to the north-west by Commerce Way, & to the northeast by a wooded area, with an office park beyond.

Proposed Redevelopment

The proposed development entails the construction of a ±2,847 square-foot, single-story banking facility, inclusive of an integrated drive-through component. The project location within the lot is currently an undeveloped grassy parcel, so no demolition of existing structures

are required. Additional site improvements are proposed, including vehicular parking, pedestrian access, utility infrastructure, stormwater management systems, lighting and landscaping. Site access will be facilitated through the existing on-site parking lot.

LAND USE PERMIT APPLICATIONS
Site Plan Review Permit

The project will require a Site Plan Review Permit for the site improvements described above in the project summary. The project has previously met with the Technical Advisory Committee (TAC) for a review meeting. The TAC has provided their recommendations for approval for this project.

The proposed project will require the following site-related approvals from the Planning Board:

- Site Plan Review Permit
- Conditional Use Permit for Development Site
- Conditional Use Permit for Drive-Through Facility

Development Site Conditional Use Permit

Under Section 10.5B41.10 Development Site Standards are "allowed by Conditional Use Permit approval from the Planning Board, a development site is any lot or group of contiguous lots owned or controlled by the same person or entity, assembled for the purpose of a single development and including more than one principal building or building type". As the proposed development includes more than one principal building, a CUP to allow the use of the Development Site Standards is being requested for this proposed project.

Conditional Use Permit Criteria

Based on the above described and enclosed materials, the following addresses how the Project warrants the granting of a Conditional Use Permit for a Development Site by satisfying the following four (4) criteria for approval in Section 10.5B43.10 of the Zoning Ordinance:

(1) The development project is consistent with the Portsmouth Master Plan.

The Project is consistent with several goals identified in the Master Plan.

- Goal 2.1 is to ensure that new development complements and enhances its surroundings. The proposed bank pad will further enhance the continued success of the commercial, retail, and restaurants within the existing Plaza and surrounding parcels.
- Goal 3.3 is to ensure that the supply and character of commercial space can adapt to a changing economy.

(2) The development project has been designed to allow uses that are appropriate for its context and consistent with City's planning goals and objectives for the area.

The Project has been designed to be complementary to the abutting uses. Banks are an allowed use within the zone.

(3) The project includes measures to mitigate or eliminate anticipated impacts on traffic safety and circulation, demand on municipal services, stormwater runoff, natural resources, and adjacent neighborhood character.

The Project will have a negligible impact on traffic due to the existing large traffic volumes on Woodbury Avenue. A traffic study has been prepared as required under the Condition Use Permit request for a drive-through facility.

The development site has been designed to mitigate stormwater runoff with the use of detention and stormwater treatment practices.

The Project as designed will be complementary to the abutting commercial uses.

(4) The project is consistent with the purpose and intent set forth in Section 10.5B11.

Section 10.5B11.10 states that *"The purpose of Article 5B is to implement and support the goals of the City's Master Plan and Housing Policy to encourage walkable mixed-use development and continued economic vitality in the City's primary gateway areas, ensure that new development complements and enhances its surroundings, provide housing stock that is suited for changing demographics, and accommodate the housing needs of the City's current and future workforce."*

As described in Criteria 1 – 3 the Project is consistent with *the goals of the City's Master Plan* and will be providing a new location for an existing business in Portsmouth which aligns with providing *continued economic vitality in the City's primary gateway areas.*

Drive Through Conditional Use Permit

A listed in Section 10.440, Table of Uses 19.40 a drive-through facility as an accessory use to a permitted principal use is allowed in the G1 zone through a Conditional Use Permit. The principal use being sought in this application is for a retail bank, Use 5.32 which is permitted in the G1 zone.

The proposed Drive-Through facility meets the Performance Standards in Section 10.835.20:

10.835.21 - A drive-through canopy shall not project more than 26 feet from the principal building and shall be consistent with the architectural style of the building.

The proposed drive-through does not have a canopy.

10.835.22 - Illuminated menu boards or other signs associated with the drive-through facility shall be shielded from public streets and residential properties.

The proposed drive-through facility is on the Plaza side of the proposed bank building and is therefore shielded from the public street by the bank.

The proposed Drive-Through facility meets the Setbacks in Section 10.835.30:

10.835.31 - All outdoor service facilities (including transaction windows, menu boards, speakers, etc.) shall be located a minimum of 100 feet from any residential zoning district, and 50 feet from any lot line.

The proposed drive-through is 60 feet from the lot line and does not abut a residential zone.

10.835.32 - All drive-through lanes, bypass lanes, and stacking lanes shall be located a minimum of 50 feet from any residential zoning district, and 30 feet from any lot line.

The proposed drive-through is 60 feet from the lot line and does not abut a residential zone.

As required in Section 10.835.40, a Traffic Impact Study has been prepared for review and approval by the Planning Board as part of the CUP approval process showing that the level of service and traffic safety conditions of all streets and intersections to be impacted by the project will be the same as, or better than, predevelopment conditions.

CONCLUSION

We respectfully request to be placed on the Planning Board meeting agenda for August 21st, 2025. If you have any questions or need any additional information, please contact me by phone at (603) 294-9213 or by email at NAHansen@tighebond.com.

Sincerely,

TIGHE & BOND, INC.

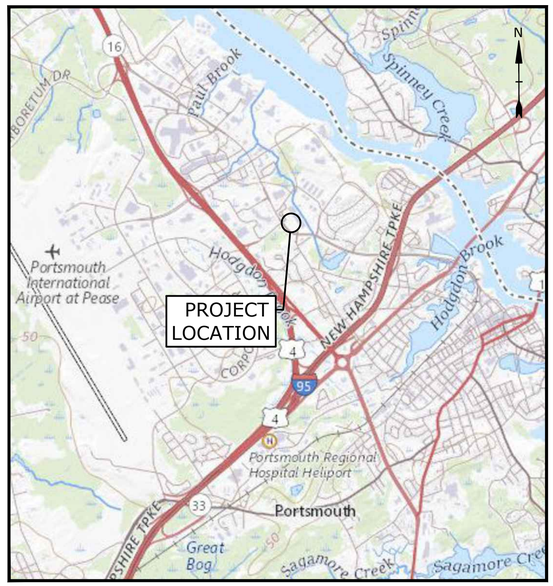
Neil A. Hansen, PE
Project Manager

Patrick M. Crimmins, PE
Vice President

Copy: Bromley-Portsmouth, LLC & RCQ-Portsmouth, LLC
c/o Quincy & Company

1465 WOODBURY AVENUE
PROPOSED BANK PAD
PORTSMOUTH, NEW HAMPSHIRE
JUNE 16, 2025
LAST REVISED: JULY 30, 2025

LIST OF DRAWINGS		
SHEET NO.	SHEET TITLE	LAST REVISED
	COVER SHEET	7/30/2025
1 OF 1	EXISTING CONDITIONS PLAN	4/16/2025
C-101	EXISTING CONDITIONS & DEMOLITION PLAN	7/30/2025
C-102	SITE PLAN	7/30/2025
C-103	GRADING, DRAINAGE, AND EROSION CONTROL PLAN	7/30/2025
C-104	UTILITY PLAN	7/30/2025
C-301	COMMUNITY SPACE EASEMENT PLAN	7/30/2025
C-501	EROSION CONTROL NOTES AND DETAILS SHEET	7/30/2025
C-502	DETAILS SHEET	7/30/2025
C-503	DETAILS SHEET	7/30/2025
C-504	DETAILS SHEET	7/30/2025
C-505	DETAILS SHEET	7/30/2025
C-506	DETAILS SHEET	7/30/2025
A01.0X	SITE LANDSCAPING PLAN	2/24/2025
A10.01	EXTERIOR ELEVATIONS	6/13/2025
TF-2	PROPOSED FLOOR PLAN	6/13/2025
1 OF 1	PHOTOMETRIC PLAN	7/22/2025



LOCATION MAP
SCALE: 1" = 3000'

PREPARED BY:

Tighe&Bond

177 CORPORATE DRIVE
PORTSMOUTH, NH 03801
603-433-8818

OWNER:

BROMLEY-PORTSMOUTH LLC &
RCQ-PORTSMOUTH LLC
c/o QUINCY & COMPANY, INC.
57 Dedham Avenue
Needham, MA 02492

SURVEYOR:

GREENMAN-PEDERSEN, INC.
44 Stiles Road, Suite One
Salem, NH 03079

ARCHITECT:

BISBANO + ASSOCIATES, INC.
188 Valley Street, Suite 100
Providence, RI 02909

STATE OF NEW HAMPSHIRE – PATRICK CRIMMINS – No. 12378 – LICENSED PROFESSIONAL ENGINEER – 7/30/25

STATE OF NEW HAMPSHIRE – NEIL A HANSEN – No. 15227 – LICENSED PROFESSIONAL ENGINEER – 07/30/2025

PLANNING BOARD SUBMISSION
COMPLETE SET 17 SHEETS

811 DigSafe MA-ME-NH-RI-VT

LEGEND

- SGC — SLOPED GRANITE CURB
- VGC — VERTICAL GRANITE CURB
- SSLW — SINGLE SOLID LINE WHITE
- 90 — CONTOUR ELEVATION
- TREE
- UTILITY POLE
- GUY WIRE
- OVERHEAD WIRE
- PB — PULL BOX
- SIGN
- SPOT ELEVATION
- DRAIN MANHOLE
- CATCH BASIN
- SEWER MANHOLE
- TELEPHONE MANHOLE
- LIGHT POLE
- EASEMENT LINE
- PROPERTY LINE
- ABUTTER PROPERTY LINE

NOTES:

1) ZONE: GATEWAY NEIGHBORHOOD MIXED USE CORRIDOR DISTRICT (G1)

   REFER TO THE CITY OF PORTSMOUTH ZONING ORDINANCE FOR VERIFICATION, ADDITIONAL RESTRICTIONS AND PERMITTED USES. THE ZONING INFORMATION SHOWN HEREON IS BASED ON A REVIEW OF THE PORTSMOUTH ZONING ORDINANCE.

2) THIS PLAN IS THE RESULT OF AN ON-THE-GROUND FIELD SURVEY PERFORMED BY THIS OFFICE BETWEEN DECEMBER 12 AND DECEMBER 13, 2024.

3) BEARINGS SHOWN HEREON ARE BASED ON NAD83 PER GPS OBSERVATIONS PERFORMED BY THIS OFFICE ON DECEMBER 12, 2024.

4) ELEVATIONS SHOWN HEREON ARE BASED ON NAVD88 PER GPS OBSERVATIONS PERFORMED BY THIS OFFICE ON DECEMBER 12, 2024.

5) THIS SURVEY IS NOT A CERTIFICATION TO OWNERSHIP OF OR TITLE TO LANDS SHOWN HEREON. OWNERSHIP AND ENCUMBRANCES ARE MATTERS OF TITLE EXAMINATION AND NOT THOSE OF A BOUNDARY SURVEY.

NOTES (CONTINUED):

6) EASEMENTS SHOWN HEREON WERE IDENTIFIED THROUGH A SEARCH OF PUBLIC RECORDS. OTHER EASEMENTS MAY EXIST OTHER THAN THOSE SHOWN THAT WOULD BE IDENTIFIED THROUGH A TITLE EXAMINATION. NO TITLE EXAMINATION WAS PROVIDED TO THE SURVEYOR DURING THE PREPARATION OF THIS PLAN.

7) LOCATION OF UNDERGROUND UTILITIES IS APPROXIMATE ONLY. ADDITIONAL UNDERGROUND UTILITIES OTHER THAN THOSE SHOWN MAY BE ENCOUNTERED.

8) THE SURVEY TRACT IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA (100 YEAR FLOOD) PER FLOOD INSURANCE RATE MAP NUMBER 33015C0260F, WITH AN EFFECTIVE DATE OF JANUARY 29, 2021.

UTILITY NOTES:

WATER SERVICE – PUBLIC WATER – CITY OF PORTSMOUTH

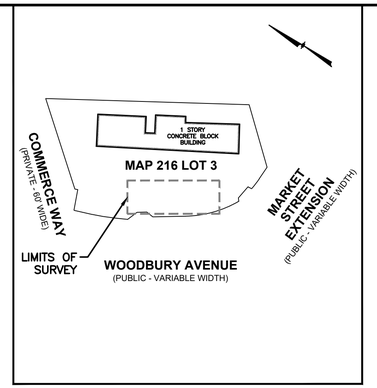
SEWER SERVICE – PUBLIC SEWER – CITY OF PORTSMOUTH

GAS SERVICE – NATURAL GAS – UNITIL

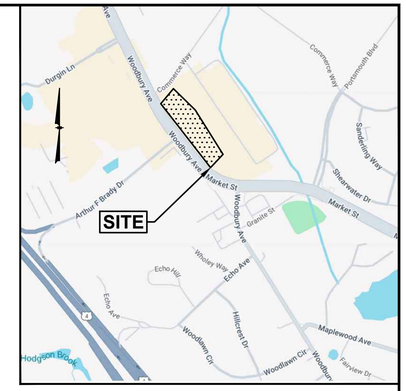
ELECTRICAL SERVICE – EVERSOURCE

OWNER OF RECORD:

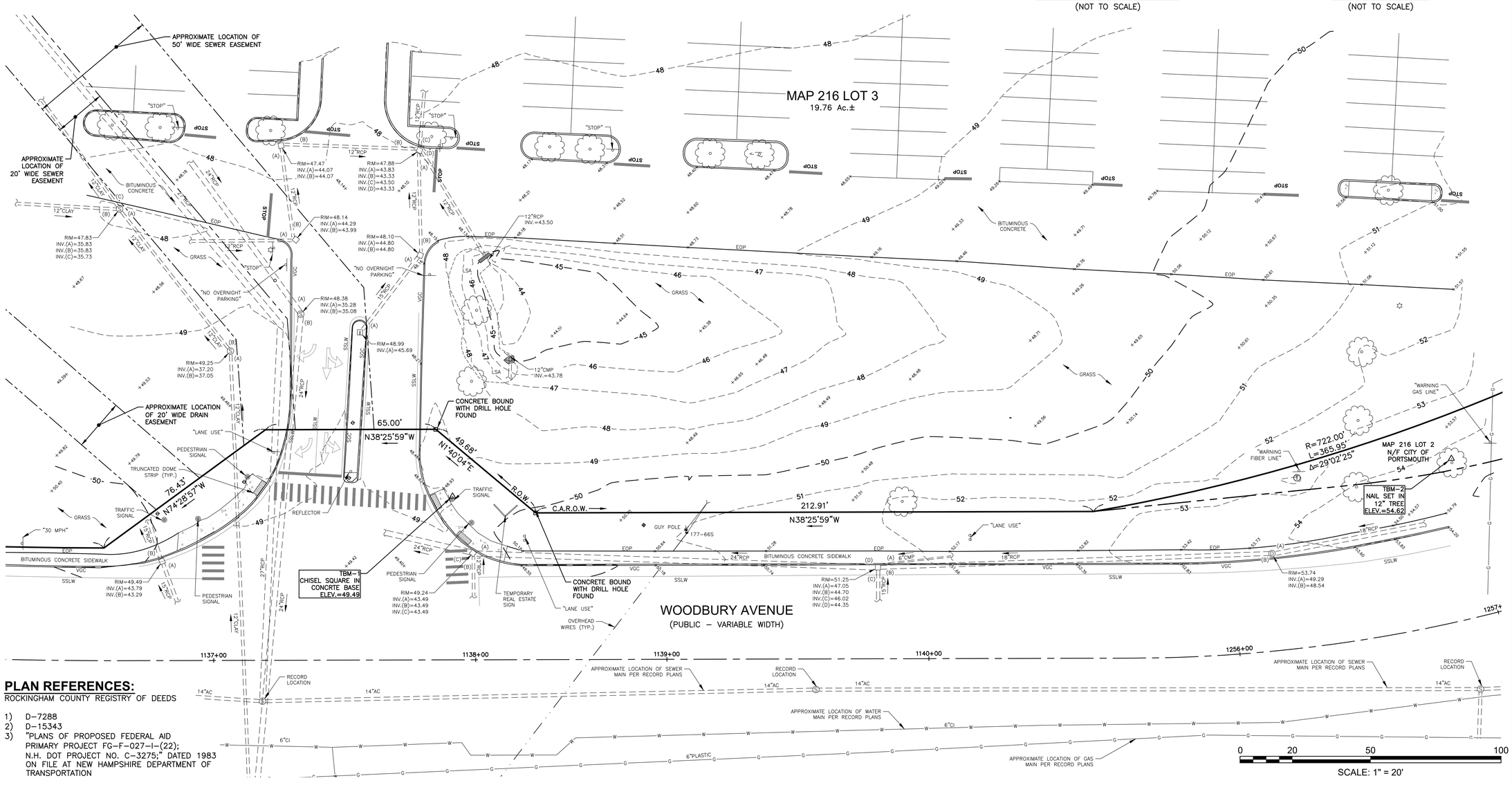
MAP 216 LOT 3
BROMLEY PORTSMOUTH LLC
144 GOULD ST SUITE 152
NEEDHAM, MA 02494
BOOK 4486 PAGE 2167



PROPERTY OVERVIEW
(NOT TO SCALE)



LOCATION MAP
(NOT TO SCALE)



PLAN REFERENCES:

ROCKINGHAM COUNTY REGISTRY OF DEEDS

1) D-7288
2) D-15343
3) "PLANS OF PROPOSED FEDERAL AID PRIMARY PROJECT FG-F-027-I-(22); N.H. DOT PROJECT NO. C-3275;" DATED 1983 ON FILE AT NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION

GPI
Engineering
Design
Planning
Construction Inspection
603.893.0720 GPINET.COM
Greenman-Pedersen, Inc.
44 Stiles Road, Suite One
Salem, NH 03079

PREPARED FOR
TIGHE & BOND, INC.
177 CORPORATE DRIVE
PORTSMOUTH, NH 03801

ASSESSOR MAP 216 LOT 3
1465 WOODBURY AVENUE
PORTSMOUTH, NEW HAMPSHIRE

STATE OF NEW HAMPSHIRE
No. 1019
SCOTT M. L'ITALIEN
LICENSED LAND SURVEYOR
4/16/2025

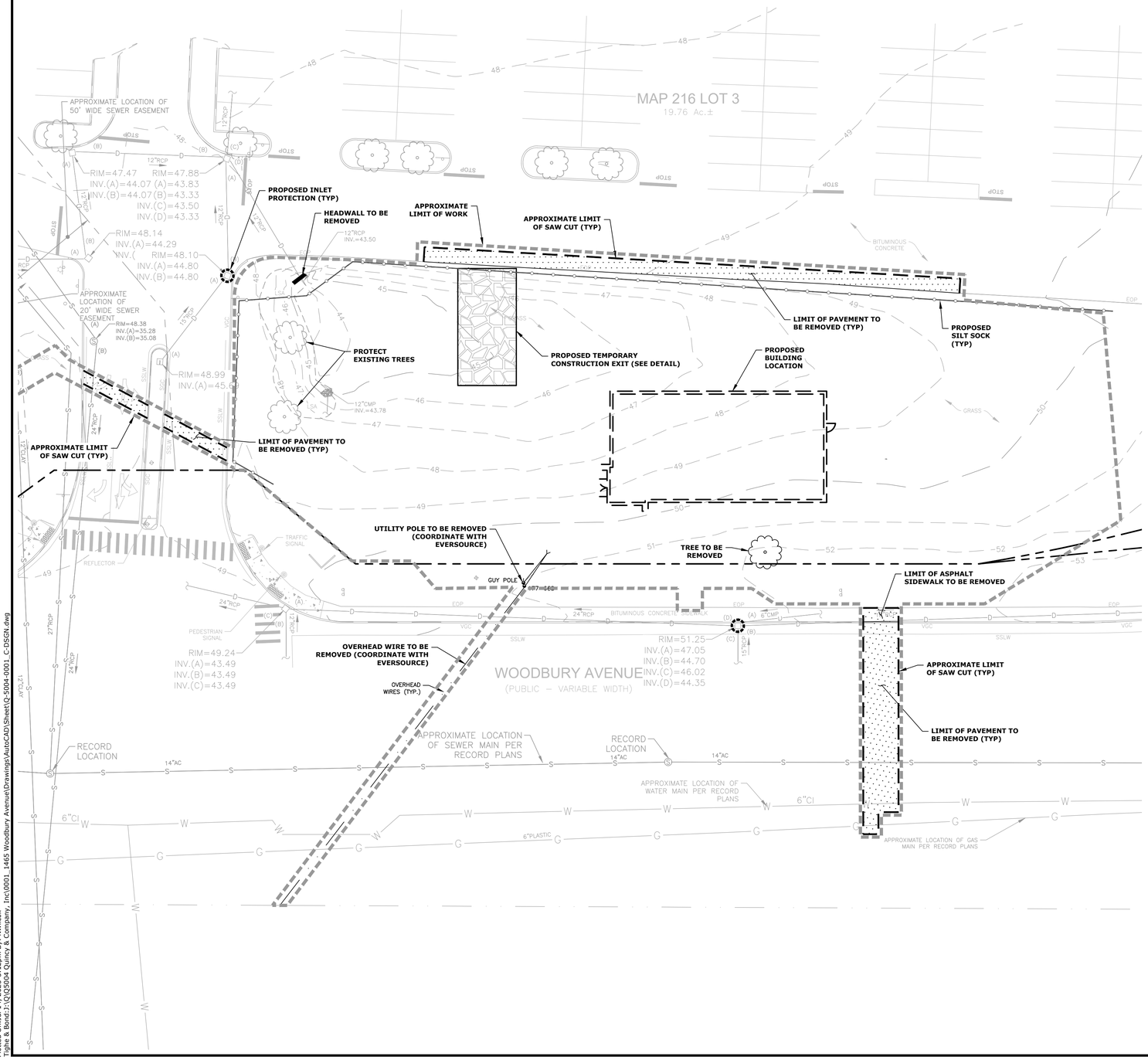
NO.	REVISION	DATE
	REVISIONS	
	APRIL 16, 2025	
DRAWN BY: KAC	CHECKED BY: SML	

EXISTING CONDITIONS PLAN

SCALE: 1"=20'

NEX-2200150.43

1 OF 1



EXISTING CONDITIONS PLAN NOTES:

1. EXISTING CONDITIONS ARE BASED ON A FIELD SURVEY BY GREENMAN-PEDERSEN, INC. DATED 1/10/2025.

DEMOLITION NOTES:

1. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION ACTIVITIES.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE CONDITIONS OF ALL OF THE PERMIT APPROVALS.
3. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES, AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK AT NO ADDITIONAL COST TO THE OWNER.
4. THE CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES. CALL DIG SAFE AT LEAST 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION/CONSTRUCTION ACTIVITIES.
5. THE ACCURACY AND COMPLETENESS OF SUBSURFACE INFORMATION (E.G., EXISTING UTILITIES) SHOWN ON THESE DRAWINGS IS NOT GUARANTEED AND SOME SUBSURFACE INFORMATION MAY NOT BE SHOWN. DETERMINE THE LOCATIONS AND ELEVATIONS OF ALL SUBSURFACE FEATURES WHICH MAY AFFECT CONSTRUCTION OPERATIONS BY TEST PIT OR OTHER METHODS, AS NECESSARY TO PREVENT DAMAGE TO UTILITIES AND OTHER SUBSURFACE FEATURES, AND/OR INTERRUPTIONS IN UTILITY SERVICE. PROVIDE DATA COLLECTED THROUGH THESE INVESTIGATIONS TO THE ENGINEER PRIOR TO CONSTRUCTING THE PROPOSED IMPROVEMENTS.
6. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY UTILITIES IDENTIFIED DURING CONSTRUCTION THAT ARE NOT SHOWN ON THE DRAWINGS OR THAT DIFFER IN SIZE OR MATERIAL.
7. THE CONTRACTOR IS RESPONSIBLE FOR SUPPORT OF EXISTING UTILITIES AND REPAIR OR REPLACEMENT COSTS OF UTILITIES DAMAGED DURING CONSTRUCTION, WHETHER ABOVE OR BELOW GRADE. REPLACE DAMAGED UTILITIES IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER AND AT NO COST TO THE PROPERTY OWNER.
8. ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/ DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO MATCH ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
9. THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY; COORDINATION WITH THE OWNER, ALL SUBCONTRACTORS, AND WITH OTHER CONTRACTORS WORKING WITHIN THE LIMITS OF WORK, THE MEANS AND METHODS OF CONSTRUCTING THE PROPOSED WORK.
10. THE CONTRACTOR SHALL VERIFY ORIGIN OF ALL DRAINS AND UTILITIES PRIOR TO REMOVAL/TERMINATION TO DETERMINE IF DRAINS OR UTILITY ARE ACTIVE, AND SERVICES ANY ON OR OFF-SITE STRUCTURE TO REMAIN. THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY SUCH UTILITY FOUND AND SHALL MAINTAIN THESE UTILITIES UNTIL PERMANENT SOLUTION IS IN PLACE.
11. ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCES AND CODES.
12. REMOVE TREES AND BRUSH AS REQUIRED FOR COMPLETION OF WORK. CONTRACTOR SHALL GRUB AND REMOVE ALL STUMPS WITHIN LIMITS OF WORK AND DISPOSE OF OFF-SITE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND OFF-SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK, EXCEPT FOR WORK NOTED TO BE COMPLETED BY OTHERS.
14. THE CONTRACTOR SHALL COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
15. UTILITIES SHALL BE TERMINATED AT THE MAIN LINE PER UTILITY COMPANY STANDARDS. THE CONTRACTOR SHALL REMOVE ALL ABANDONED UTILITIES LOCATED WITHIN THE LIMITS OF WORK.
16. SAW CUT AND REMOVE PAVEMENT ONE (1) FOOT OFF PROPOSED EDGE OF PAVEMENT OR EXISTING CURB LINE IN ALL AREAS WHERE PAVEMENT TO BE REMOVED ABUTS EXISTING PAVEMENT OR CONCRETE TO REMAIN.
17. PAVEMENT REMOVAL LIMITS ARE SHOWN FOR CONTRACTOR'S CONVENIENCE. ADDITIONAL PAVEMENT REMOVAL MAY BE REQUIRED DEPENDING ON THE CONTRACTOR'S OPERATION. CONTRACTOR TO VERIFY FULL LIMITS OF PAVEMENT REMOVAL PRIOR TO BID.
18. SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL UTILITIES TO BE REMOVED AND PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.
19. THE CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY TRAFFIC CONTROL/SAFETY DEVICES TO ENSURE SAFE VEHICULAR AND PEDESTRIAN ACCESS THROUGH THE WORK AREA, OR FOR SAFELY IMPLEMENTING DETOURS AROUND THE WORK AREA. PERFORM TRAFFIC CONTROL IN ACCORDANCE WITH THE CONTRACTOR'S APPROVED TRAFFIC CONTROL PLAN.
20. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL PROPERTIES WITHIN THE PROJECT AREA AT ALL TIMES DURING CONSTRUCTION.
21. THE CONTRACTOR SHALL PHASE DEMOLITION AND CONSTRUCTION AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO EXISTING BUSINESSES THROUGHOUT THE CONSTRUCTION PERIOD. EXISTING BUSINESS SERVICES INCLUDE, BUT ARE NOT LIMITED TO ELECTRICAL, COMMUNICATION, FIRE PROTECTION, DOMESTIC WATER AND SEWER SERVICES. TEMPORARY SERVICES, IF REQUIRED, SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. CONTRACTOR SHALL PROVIDE DETAILED CONSTRUCTION SCHEDULE TO OWNER PRIOR TO ANY DEMOLITION/CONSTRUCTION ACTIVITIES AND SHALL COORDINATE TEMPORARY SERVICES TO ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER.
22. THE CONTRACTOR SHALL PROTECT ALL PROPERTY MONUMENTATION THROUGHOUT DEMOLITION AND CONSTRUCTION OPERATIONS. SHOULD ANY MONUMENTATION BE DISTURBED BY THE CONTRACTOR, THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED SURVEYOR TO REPLACE DISTURBED MONUMENTS.
23. THE CONTRACTOR SHALL PAY ALL COSTS NECESSARY FOR TEMPORARY PARTITIONING, BARRICADING, FENCING, SECURITY AND SAFETY DEVICES REQUIRED FOR THE MAINTENANCE OF A CLEAN AND SAFE CONSTRUCTION SITE.
24. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ADDITIONAL PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE THE WORK AND ARRANGE FOR AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION.
25. THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN PUBLIC RIGHT OF WAY WITH THE CITY OF PORTSMOUTH.
26. ALL WORK SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS AND WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
27. BEFORE ANY DEWATERING IS PERFORMED A TEMPORARY DISCHARGE PERMIT FROM THE NHDES IS REQUIRED.
28. NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICT, ERROR, AMBIGUITY, OR DISCREPANCY WITH THE PLANS OR BETWEEN THE PLANS AND ANY APPLICABLE LAW, REGULATION, CODE, STANDARD SPECIFICATION, OR MANUFACTURER'S INSTRUCTIONS.
29. TIGHE & BOND ASSUMES NO RESPONSIBILITY FOR ANY ISSUES, LEGAL OR OTHERWISE, RESULTING FROM CHANGES MADE TO THESE DRAWINGS WITHOUT WRITTEN AUTHORIZATION FROM TIGHE & BOND.

LEGEND

- APPROXIMATE LIMIT OF PAVEMENT TO BE REMOVED
- APPROXIMATE LIMIT OF WORK
- PROPOSED LIMIT OF SAW CUT
- PROPOSED SILT SOCK
- PROPOSED INLET PROTECTION
- PROPOSED BUILDING FOOTPRINT
- EXISTING DRAIN LINE
- EXISTING SEWER LINE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING CATCH BASIN
- EXISTING DRAIN MANHOLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- EXISTING SEWER MANHOLE
- UTILITY POLE
- EXISTING HYDRANT
- TYP — TYPICAL
- COORD — COORDINATE

Tighe&Bond

PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE
7/30/25

NEIL A HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE
07/30/2025

0 20' 40'
GRAPHIC SCALE

PROPOSED BANK PAD

BROMLEY-PORTSMOUTH, LLC &
RCQ-PORTSMOUTH, LLC
c/o QUINCY & COMPANY, INC.

1465 WOODBURY AVE
PORTSMOUTH, NH

MARK	DATE	DESCRIPTION
B	7/30/2025	PB Submission
A	6/16/2025	TAC Submission

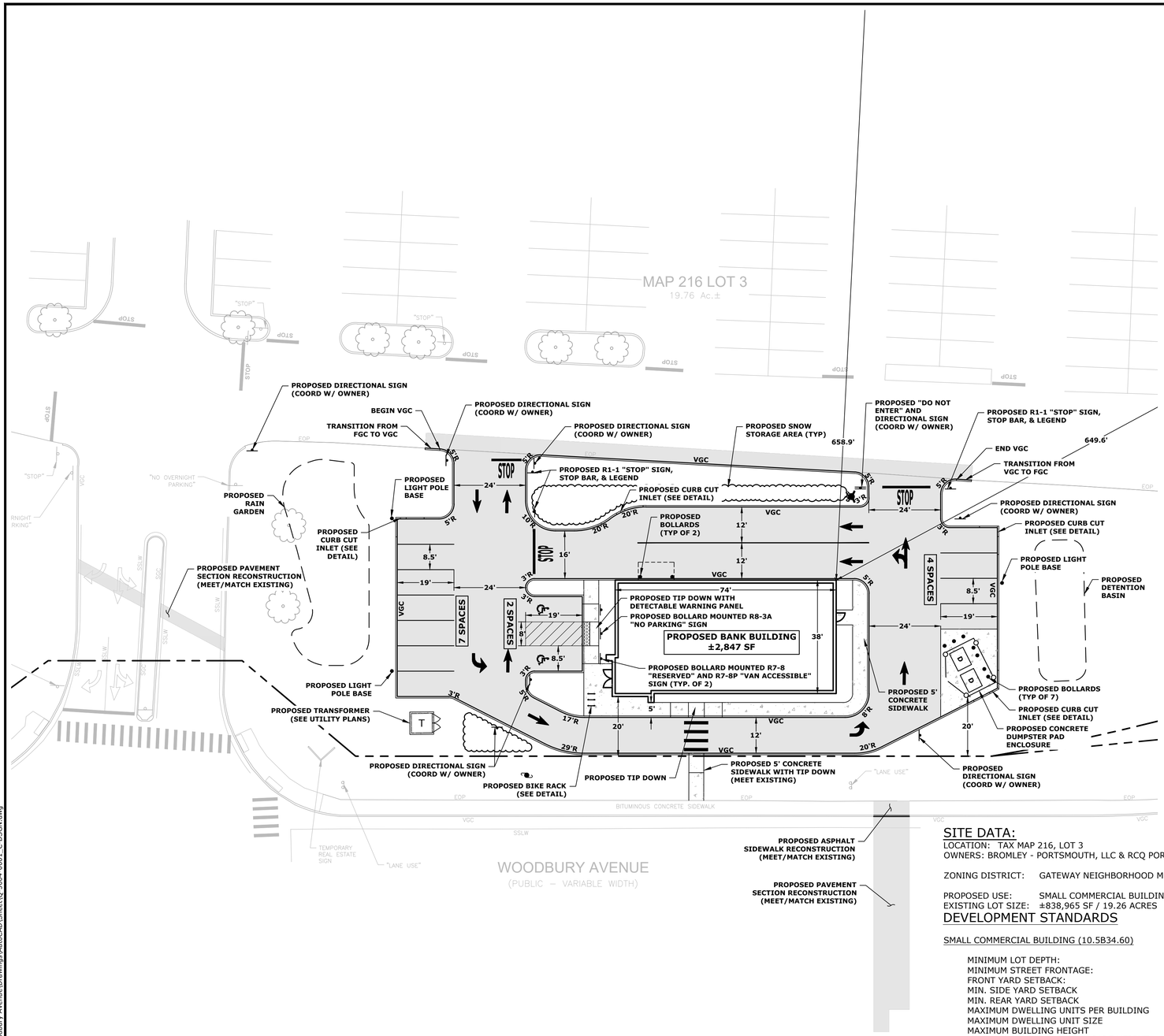
PROJECT NO:	Q5004-0001
DATE:	6/16/2025
FILE:	Q-5004-0001_C-DSGN.dwg
DRAWN BY:	NHW
DESIGNED/CHECKED BY:	NAH
APPROVED BY:	PMC

EXISTING CONDITIONS & DEMOLITION PLAN

SCALE: AS SHOWN

C-101

Last Saved: 7/14/2025
Plotted: Jul 14, 2025 - 1:12pm By: NWilcox
Tighe & Bond:J:\Q\Q5004 Quincy & Company, Inc\0001_1465 Woodbury Avenue\Drawings\AutoCAD\Sheet\Q-5004-0001_C-DSGN.dwg



SITE NOTES:

1. PAVEMENT MARKINGS, INCLUDING BUT NOT LIMITED TO; PARKING SPACES, STOP BARS, ADA SYMBOLS, PAINTED ISLANDS, CROSS WALKS, ARROWS, LEGENDS, AND CENTERLINES, SHALL BE CONSTRUCTED AS SHOWN ON THE DRAWINGS AND DETAILS, AND SHALL MEET THE FOLLOWING REQUIREMENTS:
   - ALL ON-SITE PAVEMENT MARKINGS EXCEPT CENTERLINES & MEDIAN ISLANDS SHALL BE CONSTRUCTED USING WHITE TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248 TYPE "F".
   - ALL ON-SITE CENTERLINES AND MEDIAN ISLANDS SHALL BE CONSTRUCTED USING YELLOW TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248 TYPE "F".
   - ALL PAVEMENT MARKINGS WITHIN PUBLIC RIGHT OF WAY SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, AND APPLICABLE DEPARTMENT OF TRANSPORTATION (DOT), STANDARD SPECIFICATIONS.
2. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" CURRENT EDITION, "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" CURRENT EDITION, AND THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA), THE ARCHITECTURAL BARRIERS ACT (ABA), AND THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (AAB), AS APPLICABLE.
3. THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED LAND SURVEYOR TO DETERMINE ALL LINES AND GRADES.
4. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAW CUT LINE WITH RS-1 EMULSION IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
5. THE CONTRACTOR TO PROVIDE BACKFILL AND COMPACTION AT CURB LINE AFTER CONCRETE FORMS FOR SIDEWALKS AND PADS HAVE BEEN STRIPPED.
6. COORDINATE ALL WORK ADJACENT TO BUILDINGS WITH BUILDING DRAWINGS/CONTRACTOR.
7. SEE ARCHITECTURAL/BUILDING DRAWINGS FOR ALL CONCRETE PADS & SIDEWALKS ADJACENT TO BUILDING.
8. ALL LIGHT POLE BASES NOT PROTECTED BY A RAISED CURB SHALL BE PAINTED YELLOW.
9. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
10. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES & SPECIFICATIONS.
11. THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN PUBLIC RIGHT OF WAY WITH THE CITY OF PORTSMOUTH.
12. ALL WORK SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS AND WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
13. THE CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND .PDF FILES) TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
14. PROPERTY MANAGER WILL BE RESPONSIBLE FOR TIMELY SNOW REMOVAL FROM ALL PUBLIC WALKS, DRIVES, AND PARKING AREAS ON-SITE. SNOW SHALL BE HAULED OFF-SITE AND LEGALLY DISPOSED OF, WHEN NECESSARY, WHEN SNOW STORAGE AREAS HAVE REACHED CAPACITY.
15. NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICT, ERROR, AMBIGUITY, OR DISCREPANCY WITH THE PLANS OR BETWEEN THE PLANS AND ANY APPLICABLE LAW, REGULATION, CODE, STANDARD SPECIFICATION, OR MANUFACTURER'S INSTRUCTIONS.
16. TIGHE & BOND ASSUMES NO RESPONSIBILITY FOR ANY ISSUES, LEGAL OR OTHERWISE, RESULTING FROM CHANGES MADE TO THESE DRAWINGS WITHOUT WRITTEN AUTHORIZATION FROM TIGHE & BOND.

SITE RECORDING NOTES:

1. THIS SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
2. ALL IMPROVEMENTS SHOWN ON THIS SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR.

LEGEND

	PROPOSED BUILDING
	PROPOSED PAVEMENT SECTION
	PROPOSED CONCRETE SECTION
	PROPOSED SNOW STORAGE
	PROPERTY LINE
	PROPOSED EDGE OF PAVEMENT
	PROPOSED CURB
	PROPOSED SIGN
•	PROPOSED BOLLARD
TYP	TYPICAL
BLDG	BUILDING
COORD	COORDINATE
VGC	VERTICAL GRANITE CURB
SGC	SLOPED GRANITE CURB

SITE DATA:

LOCATION: TAX MAP 216, LOT 3
OWNERS: BROMLEY - PORTSMOUTH, LLC & RCQ PORTSMOUTH, LLC

ZONING DISTRICT: GATEWAY NEIGHBORHOOD MIXED USE CORRIDOR (G1)

PROPOSED USE: SMALL COMMERCIAL BUILDING (RETAIL BANK)
EXISTING LOT SIZE: ±838,965 SF / 19.26 ACRES

DEVELOPMENT STANDARDS

SMALL COMMERCIAL BUILDING (10.5B34.60)	REQUIRED	PROPOSED
MINIMUM LOT DEPTH:	NR	-
MINIMUM STREET FRONTAGE:	50 FT	2220.2 FT
FRONT YARD SETBACK:	0-20 FT	20 FT
MIN. SIDE YARD SETBACK	10 FT	649.6 FT
MIN. REAR YARD SETBACK	15 FT	658.9 FT
MAXIMUM DWELLING UNITS PER BUILDING	NR	-
MAXIMUM DWELLING UNIT SIZE	NR	-
MAXIMUM BUILDING HEIGHT	3 STORIES OR 40 FT	<40 FT
MINIMUM STREET-FACING FACADE HEIGHT	18 FT	
MAX. FINISH FLOOR ABOVE SIDEWALK	24"	
MAXIMUM BUILDING COVERAGE	70%	<1%
MAXIMUM BUILDING FOOTPRINT	10,000 SF	2,847 SF
MAXIMUM FACADE MODULATION LENGTH	50 FT	<50 FT
MINIMUM STREET FACING FACADE GLAZING	50% GROUND FLOOR	
MAXIMUM STREET FACING ENTRANCE SPACING	NR	-
ALLOWED ROOF TYPES	ALL	
ALLOWED FACADE TYPES: FORECOURT, RECESSED ENTRY, PORCH, OFFICEFRONT, SHOPFRONT, TERRACE, GALLERY, ARCADE		
COMMUNITY SPACE:	REQUIRED	PROPOSED
	10%	11.3%
	86,085 SF	96,975 SF
OPEN SPACE:		
	20%	21%
	172,171 SF	180,861 SF

PARKING REQUIREMENTS

FINANCIAL SERVICES
(1 PER 350 SF)

PARKING SPACES	REQUIRED	PROPOSED
	9 SPACES	13 SPACES
ADA PARKING SPACES	REQUIRED[2]	PROPOSED
	1 SPACES	2 SPACES

(2) - PER THE AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS, LATEST EDITION.

PARKING SPACE DIMENSIONAL REQUIREMENTS:

STANDARD 90° STALL :		
WIDTH	8.5 FT MIN	8.5 FT
LENGTH	19 FT MIN	19 FT
DRIVE AISLE WIDTH:		
90° (2-WAY TRAFFIC)	24 FT	24 FT

BICYCLE SPACES	REQUIRED	PROPOSED
1 BICYCLE SPACE / 10 PARKING SPACES:	2 SPACES	3 SPACES

Tighe&Bond

PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE
7/30/25

NEIL A HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE
07/30/2025

0 20' 40'
GRAPHIC SCALE

PROPOSED BANK PAD

BROMLEY-PORTSMOUTH, LLC &
RCQ-PORTSMOUTH, LLC
c/o QUINCY & COMPANY, INC.

1465 WOODBURY AVE
PORTSMOUTH, NH

MARK	DATE	DESCRIPTION
B	7/30/2025	PB Submission
A	6/16/2025	TAC Submission

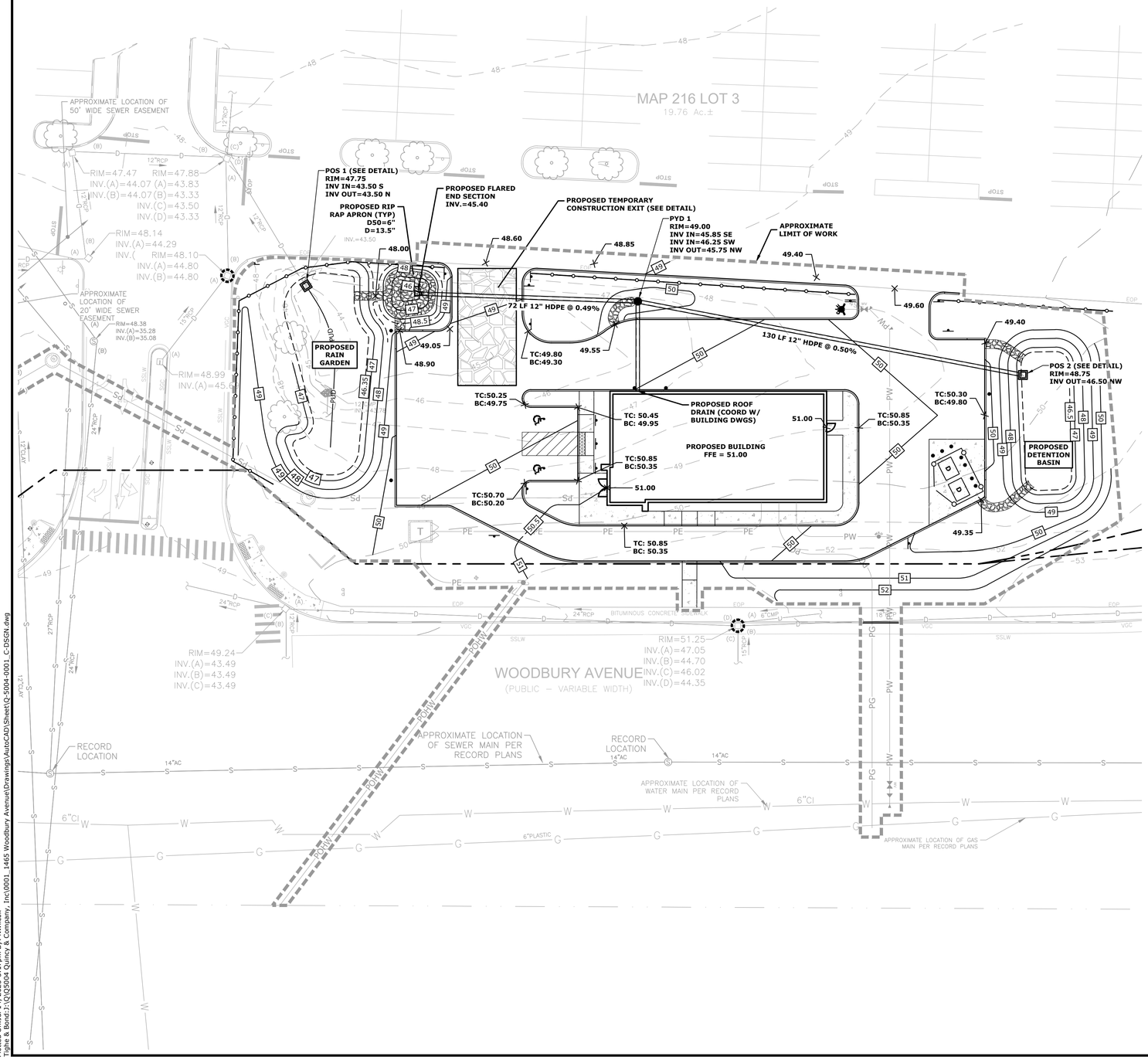
PROJECT NO:	Q5004-0001
DATE:	6/16/2025
FILE:	Q-5004-0001_C-DSGN.dwg
DRAWN BY:	NHW
DESIGNED/CHECKED BY:	NAH
APPROVED BY:	PMC

SITE PLAN

SCALE: AS SHOWN

C-102

Last Saved: 7/14/2025
Plot Date: 07/31/2025 3:16pm By: NWilcox
Tighe & Bond J:\Q\Q5004 Quincy & Company, Inc\0001_1465 Woodbury Avenue\Drawings\AutoCAD\Sheet\Q-5004-0001_C-DSGN.dwg



GRADING AND DRAINAGE NOTES:

1. GENERAL COMPACTION REQUIREMENTS:
   - BELOW PAVED OR CONCRETE AREAS: 95%
   - TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL: 95%
   - BELOW LOAM AND SEED AREAS: 90%

   * ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557, METHOD C FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D-1556 OR ASTM-2922.
2. ALL STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HANCOR HI-Q, ADS N-12 OR EQUAL) OR RCP CLASS IV, UNLESS OTHERWISE SPECIFIED.
3. SEE UTILITY PLAN FOR ALL SITE UTILITY INFORMATION.
4. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
5. THE CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE AND LAWN AREAS FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCES, EXITS, RAMPS AND LOADING DOCK AREAS ADJACENT TO THE BUILDING.
6. PROVIDE SITE GRADING AT ACCESSIBLE SIDEWALK RAMPS, SIDEWALKS, AND BUILDING ENTRANCES THAT IS CONSISTENT WITH THE RELEVANT ACCESS REQUIREMENTS OF THE ARCHITECTURAL BARRIERS ACT (ABA), THE AMERICANS WITH DISABILITIES ACT (ADA), AND MA ARCHITECTURAL ACCESS BOARD REQUIREMENTS (AAB). SMALL CHANGES IN GRADE OVER RELATIVELY SHORT DISTANCES (E.G. AT PARKING SPACES, ACCESSIBLE ROUTES, AND RAMPS) MIGHT NOT BE CLEARLY DEPICTED WITHIN THE CONTOUR INTERVAL SHOWN. COMPLY WITH THE CRITERIA IN THESE STANDARDS. SELECT MAXIMUM SLOPE CRITERIA ARE REPRODUCED BELOW:
   - ACCESSIBLE PARKING STALLS AND PASSENGER LOADING ZONES (IN ANY DIRECTION) SHALL BE < 2.0%
   - LONGITUDINAL SLOPE ALONG ACCESSIBLE ROUTES SHALL BE < 5.0%
   - CROSS SLOPE ALONG ACCESSIBLE ROUTES SHALL BE < 2.0%
7. THE CONTRACTOR SHALL THOROUGHLY CLEAN ALL CATCH BASINS AND DRAIN LINES, WITHIN THE LIMIT OF WORK, OF SEDIMENT IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.
8. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND LOCAL CODES.
9. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED FERTILIZER AND MULCH.
10. ALL PROPOSED CATCH BASINS SHALL BE EQUIPPED WITH OIL/GAS SEPARATOR HOODS AND 4' SUMPS.
11. ALL WORK AND STORM DRAIN CONSTRUCTION SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS AND WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
12. THE CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND .PDF FILES) TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
13. SEE EXISTING CONDITIONS PLAN(S) FOR BENCH MARK INFORMATION.
14. THE CONTRACTOR SHALL VERIFY INVERTS OF EXISTING DRAIN LINES AND STRUCTURES AT PROPOSED DRAINAGE CONNECTION LOCATIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES.
15. NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICT, ERROR, AMBIGUITY, OR DISCREPANCY WITH THE PLANS OR BETWEEN THE PLANS AND ANY APPLICABLE LAW, REGULATION, CODE, STANDARD SPECIFICATION, OR MANUFACTURER'S INSTRUCTIONS.
16. TIGHE & BOND ASSUMES NO RESPONSIBILITY FOR ANY ISSUES, LEGAL OR OTHERWISE, RESULTING FROM CHANGES MADE TO THESE DRAWINGS WITHOUT WRITTEN AUTHORIZATION FROM TIGHE & BOND.

GENERAL EROSION CONTROL NOTES:

1. ALL EROSION CONTROL MEASURES AND PRACTICES SHALL CONFORM TO THE "NEW HAMPSHIRE STORMWATER MANUAL VOLUME 3: EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION", PREPARED BY NHDES.
2. SEE SHEET C-501 AND C-502 FOR ADDITIONAL EROSION CONTROL REQUIREMENTS AND DETAILS.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL EROSION AND SEDIMENT CONTROL MEASURES FOR APPROVAL.
4. AS THE FIRST ORDER OF WORK, PRIOR TO ANY EARTH DISTURBANCE, THE CONTRACTOR SHALL INSTALL ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BUT NOT LIMITED TO; INLET PROTECTION BARRIERS, SILT SOCKS, SILT FENCES, MULCH BERMS, AND STABILIZED CONSTRUCTION EXITS AS SHOWN ON THE DRAWINGS, AND AS REQUIRED BY ALL STATE AND LOCAL PERMITS AND APPROVALS.
5. INLET PROTECTION BARRIERS SHALL BE INSTALLED AT ALL EXISTING AND PROPOSED CATCH BASINS/CURB INLETS AND YARD DRAINS WITHIN THE LIMITS OF WORK AS WELL AS ANY CATCH BASINS/CURB INLETS AND YARD DRAINS THAT RECEIVE RUNOFF FROM ANY CONSTRUCTION ACTIVITIES. THESE MEASURES SHALL BE FULLY MAINTAINED FOR THE DURATION OF THE PROJECT.
6. PERIMETER CONTROLS INCLUDING SILT FENCES, MULCH BERM, SILT SOCK, AND/OR HAY BALE BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT UNTIL ALL NON-PAVED AREAS HAVE BEEN STABILIZED.
7. THE CONTRACTOR SHALL INSTALL EROSION CONTROL BLANKETS ON ALL STEEP SLOPE AREA (3:1 OR GREATER).
8. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING DUST AND WIND EROSION THROUGHOUT THE CONSTRUCTION PERIOD. DUST CONTROL MEASURES INCLUDE, BUT NOT LIMITED TO; MOISTEN EXPOSED SOIL SURFACES PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST, MECHANICAL SWEEPERS ON PAVED SURFACES, AND COVERING SURFACES WITH CRUSHED STONE OR COARSE GRAVEL.
9. THE CONTRACTOR SHALL HAVE ALL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING, BUT NOT LIMITED TO, INLET PROTECTION BARRIERS, PERIMETER SEDIMENT CONTROLS, AND STEEP SLOPE EROSION CONTROL BLANKETS INSPECTED BY A QUALIFIED PERSON AT LEAST ONCE A WEEK OR WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.25 INCHES OR GREATER. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ADJUSTED, REPAIRED, MODIFIED, OR ADDITIONAL MEASURES INSTALLED AS NECESSARY TO ADDRESS EVOLVING CONDITIONS DURING CONSTRUCTION.
10. SEDIMENT CONTROL FILTER MEASURES SHALL BE REPLACED WHEN SEDIMENT REACHES 1/3 THE HEIGHT OF THE FILTER.
11. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
12. ALL DISTURBED AREAS NOT OTHERWISE BEING TREATED SHALL RECEIVE 6" LOAM, SEED AND FERTILIZER.
13. ALL CATCH BASIN SUMPS AND PIPING SHALL BE THOROUGHLY CLEANED TO REMOVE ALL SEDIMENT AND DEBRIS AFTER THE PROJECT HAS BEEN FULLY STABILIZED.
14. TEMPORARY SOIL STOCKPILE SHALL BE SURROUNDED WITH SEDIMENT CONTROLS AND SHALL BE STABILIZED BY TEMPORARY EROSION CONTROL SEEDING. STOCKPILE AREAS TO BE LOCATED AS FAR AS POSSIBLE FROM THE DELINEATED EDGE OF WETLANDS. STOCKPILES OVER 10 FEET SHALL HAVE SAFETY FENCING PROVIDED AROUND THE STOCKPILES.
15. IF NECESSARY CONCRETE TRUCKS WILL BE REQUIRED TO WASHOUT THE SHOOTS. THIS ACTIVITY SHALL ONLY BE DONE WITHIN A DESIGNATED CONCRETE WASHOUT FACILITY ON-SITE.
16. IF NECESSARY TEMPORARY SEDIMENT TRAPS SHALL BE PROVIDED FOR GENERAL EXCAVATION DEWATERING PRACTICES PRIOR TO DIRECTING FLOW TO ANY OTHER EROSION AND SEDIMENT CONTROL MEASURES.
17. THE CONTRACTOR SHALL BE FAMILIAR WITH SPILL PREVENTION MEASURES REQUIRED BY ALL LOCAL, STATE, AND FEDERAL REGULATIONS.

LEGEND

50	PROPOSED MAJOR CONTOURS
49	PROPOSED MINOR CONTOURS
	APPROXIMATE LIMIT OF WORK
	PROPOSED DRAINLINE
	PROPOSED SILT SOCK
	PROPOSED DRAIN MANHOLE
	PROPOSED CATCH BASIN
	PROPOSED INLET PROTECTION
	EXISTING CATCH BASIN
D	EXISTING DRAIN MANHOLE
D	EXISTING DRAIN LINE
S	EXISTING SEWER LINE
G	EXISTING GAS LINE
W	EXISTING WATER LINE
TYP	TYPICAL
COORD	COORDINATE

Tighe&Bond

PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE
7/30/25

NEIL A HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE
07/30/2025

0 20' 40'
GRAPHIC SCALE

PROPOSED BANK PAD

BROMLEY-PORTSMOUTH, LLC &
RCQ-PORTSMOUTH, LLC
c/o QUINCY & COMPANY, INC.

1465 WOODBURY AVE
PORTSMOUTH, NH

MARK	DATE	DESCRIPTION
B	7/30/2025	PB Submission
A	6/16/2025	TAC Submission

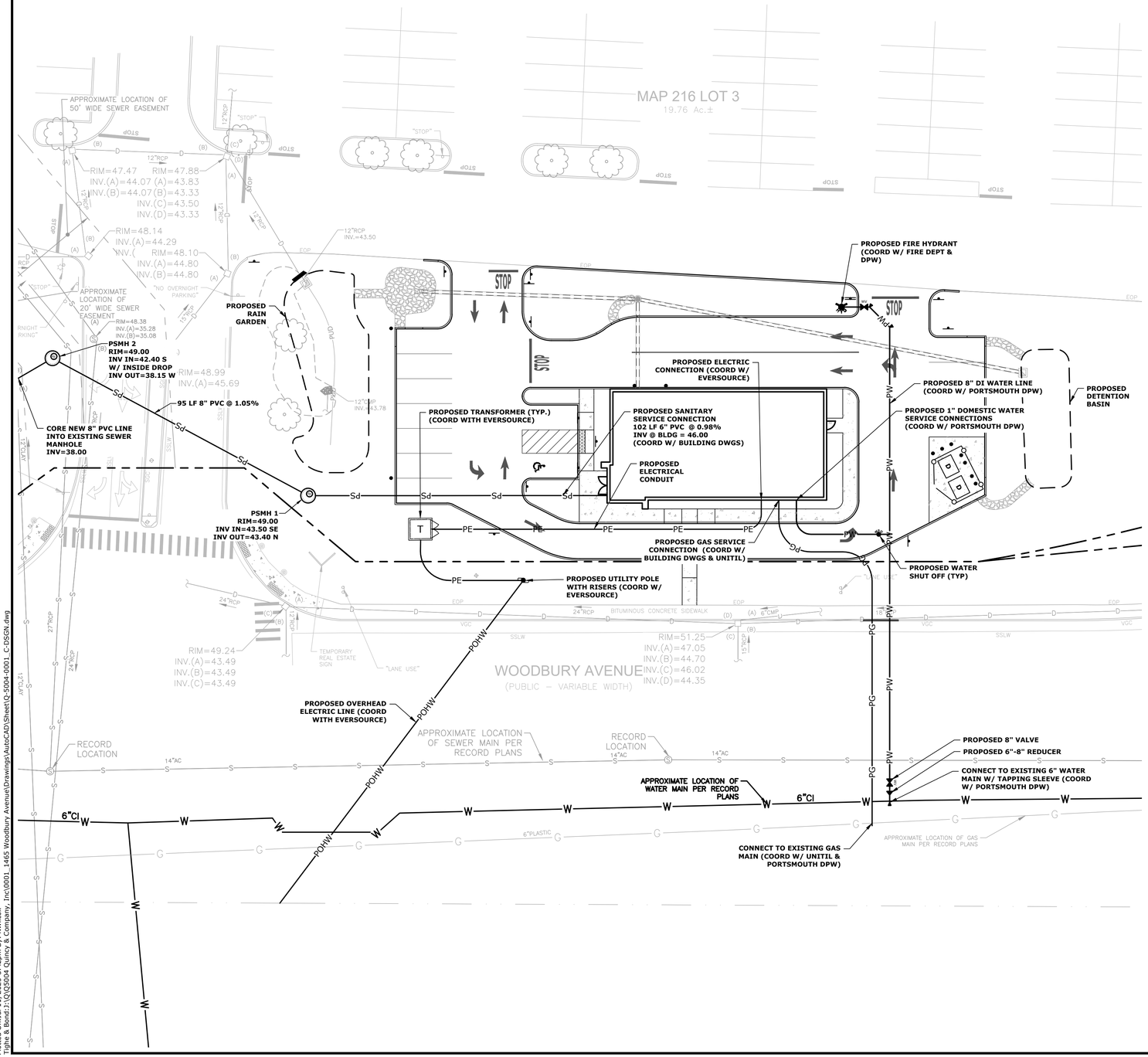
PROJECT NO:	Q5004-0001
DATE:	6/16/2025
FILE:	Q-5004-0001_C-DSGN.dwg
DRAWN BY:	NHW
DESIGNED/CHECKED BY:	NAH
APPROVED BY:	PMC

GRADING, DRAINAGE, & EROSION CONTROL PLAN

SCALE: AS SHOWN

C-103

Last Saved: 7/14/2025
Plotted: Jul 14, 2025 - 3:17pm By: NWilcox
Tighe & Bond:J:\Q\Q5004 Quincy & Company, Inc\0001_1465 Woodbury Avenue\Drawings\AutoCAD\Sheet\Q-5004-0001_C-DSGN.dwg



UTILITY NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES, AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK AT NO ADDITIONAL COST TO THE OWNER.
2. THE ACCURACY AND COMPLETENESS OF SUBSURFACE INFORMATION (E.G., EXISTING UTILITIES) SHOWN ON THESE DRAWINGS IS NOT GUARANTEED AND SOME SUBSURFACE INFORMATION MAY NOT BE SHOWN. DETERMINE THE LOCATIONS AND ELEVATIONS OF ALL SUBSURFACE FEATURES WHICH MAY AFFECT CONSTRUCTION OPERATIONS BY TEST PIT OR OTHER METHODS, AS NECESSARY TO PREVENT DAMAGE TO UTILITIES AND OTHER SUBSURFACE FEATURES, AND/OR INTERRUPTIONS IN UTILITY SERVICE. PROVIDE DATA COLLECTED THROUGH THESE INVESTIGATIONS TO THE ENGINEER PRIOR TO CONSTRUCTING THE PROPOSED IMPROVEMENTS.
3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY UTILITIES IDENTIFIED DURING CONSTRUCTION THAT ARE NOT SHOWN ON THE DRAWINGS OR THAT DIFFER IN SIZE OR MATERIAL.
4. COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY COMPANY.
   - NATURAL GAS - UNITIL
   - WATER - CITY OF PORTSMOUTH
   - SEWER - CITY OF PORTSMOUTH
   - ELECTRIC - EVERSOURCE
   - COMMUNICATIONS - CONSOLIDATED COMM/FAIRPOINT/COMCAST
3. SEE EXISTING CONDITIONS PLAN FOR BENCHMARK INFORMATION.
4. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR PROPOSED GRADING AND EROSION CONTROL MEASURES.
5. ALL WATER MAIN INSTALLATIONS SHALL BE CLASS 52, CEMENT LINED DUCTILE IRON PIPE.
6. ALL WATER MAIN INSTALLATIONS SHALL BE PRESSURE TESTED AND CHLORINATED AFTER CONSTRUCTION PRIOR TO ACTIVATING THE SYSTEM. CONTRACTOR SHALL COORDINATE CHLORINATION AND TESTING WITH THE CITY OF PORTSMOUTH WATER DEPARTMENT.
7. ALL BELOW GRADE WATER VALVES AND FITTINGS SHALL HAVE MECHANICAL JOINT (MJ) ENDS. RESTRAIN ALL WATER VALVES AND FITTINGS JOINTS WITH RETAINER GLANDS, OR AS REQUIRED BY THE CITY OF PORTSMOUTH WATER DEPARTMENT STANDARDS.
8. CONNECTION TO EXISTING WATER MAIN SHALL BE CONSTRUCTED TO THE CITY OF PORTSMOUTH WATER DEPARTMENT STANDARDS.
9. HYDRANTS, GATE VALVES, FITTINGS, ETC. SHALL MEET THE REQUIREMENTS OF THE CITY OF PORTSMOUTH FIRE AND/OR WATER DEPARTMENT.
10. ALL SEWER PIPE SHALL BE PVC SDR 35 UNLESS OTHERWISE STATED.
11. COORDINATE ALL WORK WITHIN PUBLIC RIGHT OF WAYS WITH THE CITY OF PORTSMOUTH.
12. THE CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO ABUTTING PROPERTIES THROUGHOUT CONSTRUCTION.
13. EXISTING UTILITIES TO BE REMOVED SHALL BE CAPPED AT THE MAIN AND MEET THE DEPARTMENT OF PUBLIC WORKS STANDARDS FOR CAPPING OF WATER AND SEWER SERVICES.
14. ALL ELECTRICAL MATERIAL WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, CURRENT EDITION, AND ALL APPLICABLE STATE AND LOCAL CODES.
15. THE EXACT LOCATION OF NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH THE BUILDING DRAWINGS AND THE APPLICABLE UTILITY COMPANIES. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
16. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
17. THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATES TO THE OWNER PRIOR TO THE COMPLETION OF THIS PROJECT.
18. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, CONNECTORS, COVER PLATES, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL.
19. THE CONTRACTOR SHALL PROVIDE EXCAVATION, BEDDING, BACKFILL AND COMPACTION FOR NATURAL GAS SERVICES.
20. A 10-FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. AN 18-INCH MINIMUM OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER/SANITARY SEWER CROSSINGS.
21. THE CONTRACTOR SHALL CONTACT "DIG SAFE" 72 HOURS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL HAVE THE "DIG-SAFE" NUMBER ON-SITE AT ALL TIMES.
22. THE CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND .PDF FILES) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
23. SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN
24. COORDINATE TESTING OF SEWER CONSTRUCTION WITH THE CITY OF PORTSMOUTH SEWER DEPARTMENT.
25. ALL SEWER PIPE WITH LESS THAN 6' OF COVER IN PAVED AREAS OR LESS THAT 4' OF COVER IN UNPAVED AREAS SHALL BE INSULATED.
26. CONTRACTOR SHALL COORDINATE ALL ELECTRIC WORK INCLUDING BUT NOT LIMITED TO: CONDUIT CONSTRUCTION, MANHOLE CONSTRUCTION, UTILITY POLE CONSTRUCTION, OVERHEAD WIRE RELOCATION, AND TRANSFORMER CONSTRUCTION WITH POWER COMPANY.
27. THE CONTRACTOR SHALL PHASE UTILITY CONSTRUCTION, PARTICULARLY WATER MAIN AND GAS MAIN CONSTRUCTION AS TO MAINTAIN CONTINUOUS SERVICE TO ABUTTING PROPERTIES. CONTRACTOR SHALL COORDINATE TEMPORARY SERVICES TO ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER.
28. SITE LIGHTING SPECIFICATIONS, CONDUIT LAYOUT AND CIRCUITRY FOR PROPOSED SITE LIGHTING AND SIGN ILLUMINATION SHALL BE PROVIDED BY THE PROJECT ELECTRICAL ENGINEER.
29. THE CONTRACTOR SHALL CONSTRUCT ALL UTILITIES AND DRAINS TO WITHIN 10' OF THE FOUNDATION WALLS AND CONNECT THESE TO SERVICE STUBS FROM THE BUILDING.
30. FINAL LOCATION OF ALL WATER METER AND VALVE SHALL BE COORDINATED WITH THE CITY OF PORTSMOUTH WATER DEPARTMENT PRIOR TO CONSTRUCTION.
31. THE CONTRACTOR SHALL VERIFY INVERTS OF EXISTING SEWER LINES AND STRUCTURES AT PROPOSED SEWER CONNECTION LOCATIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES.
32. NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICT, ERROR, AMBIGUITY, OR DISCREPANCY WITH THE PLANS OR BETWEEN THE PLANS AND ANY APPLICABLE LAW, REGULATION, CODE, STANDARD SPECIFICATION, OR MANUFACTURER'S INSTRUCTIONS.
33. TIGHE & BOND ASSUMES NO RESPONSIBILITY FOR ANY ISSUES, LEGAL OR OTHERWISE, RESULTING FROM CHANGES MADE TO THESE DRAWINGS WITHOUT WRITTEN AUTHORIZATION FROM TIGHE & BOND.

LEGEND

PS	PROPOSED SEWER LINE
PW	PROPOSED WATER LINE
PG	PROPOSED GAS LINE
PE	PROPOSED UNDERGROUND ELECTRIC LINE
POHW	PROPOSED OVERHEAD ELECTRIC LINE
	PROPOSED SANITARY MANHOLE
T	PROPOSED TRANSFORMER
	PROPOSED WATER VALVE
	PROPOSED THRUST BLOCK
	PROPOSED WATER SHUT OFF
D	EXISTING DRAIN LINE
S	EXISTING SEWER LINE
G	EXISTING GAS LINE
W	EXISTING WATER LINE
	PROPOSED DRAINLINE
	PROPOSED DRAIN MANHOLE
	PROPOSED CATCH BASIN
	EXISTING CATCH BASIN
D	EXISTING DRAIN MANHOLE
TYP	TYPICAL
COORD	COORDINATE
DWGS	DRAWINGS

Tighe&Bond

N

PATRICK CRIMMINS – STATE OF NEW HAMPSHIRE – No. 12378 LICENSED PROFESSIONAL ENGINEER
7/30/25

NEIL A HANSEN – STATE OF NEW HAMPSHIRE – No. 15227 LICENSED PROFESSIONAL ENGINEER
07/30/2025

0 20' 40'
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PROPOSED BANK PAD

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MARK	DATE	DESCRIPTION
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A	6/16/2025	TAC Submission

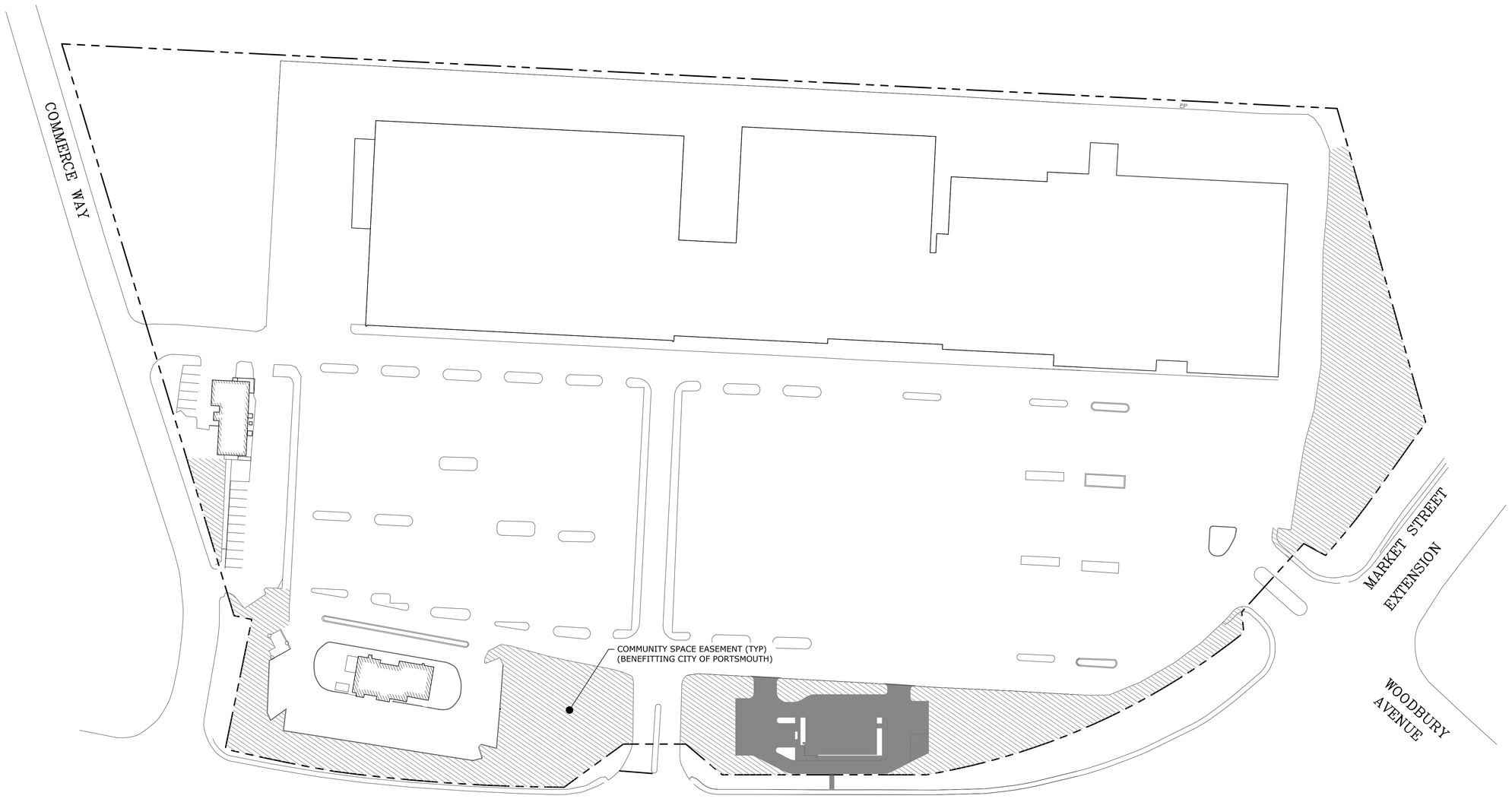
PROJECT NO:	Q5004-0001
DATE:	6/16/2025
FILE:	Q-5004-0001_C-DSGN.dwg
DRAWN BY:	NHW
DESIGNED/CHECKED BY:	NAH
APPROVED BY:	PMC

UTILITY PLAN

SCALE: AS SHOWN

C-104

Last Saved: 7/11/2025
Plotted: Jul 11, 2025 - 3:42pm By: NWilcox
Tighe & Bond J:\Q\Q5004 Quincy & Company, Inc\0001_1465 Woodbury Avenue\Drawings\AutoCAD\Sheet\Q-5004-0001_C-DSGN.dwg



EASEMENTS SHOWN HEREIN ARE FOR PERMITTING PURPOSES ONLY. FINAL EASEMENT PLAN SHALL BE PREPARED BY THE PROJECT SURVEYOR AND RECORDED AT THE ROCKINGHAM COUNTY REGISTRY OF DEEDS PRIOR TO ISSUING BUILDING PERMITS.

LEGEND

COMMUNITY SPACE EASEMENTS

Tighe&Bond

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STATE OF NEW HAMPSHIRE – PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER
7/30/25

STATE OF NEW HAMPSHIRE – NEIL A HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER
07/30/2025

0 60' 120'
GRAPHIC SCALE

PROPOSED BANK PAD

BROMLEY-PORTSMOUTH, LLC &
RCQ-PORTSMOUTH, LLC
c/o QUINCY & COMPANY, INC.

1465 WOODBURY AVE
PORTSMOUTH, NH

MARK	DATE	DESCRIPTION
B	7/30/2025	PB Submission
A	6/16/2025	TAC Submission

PROJECT NO:	Q5004-0001
DATE:	6/16/2025
FILE:	Q-5004-0001_C-DSGN.dwg
DRAWN BY:	NHW
DESIGNED/CHECKED BY:	NAH
APPROVED BY:	PMC

COMMUNITY SPACE EASEMENT PLAN

SCALE: AS SHOWN

C-301

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Tighe & Bond:J:\Q\Q5004 Quincy & Company, Inc\0001_1465 Woodbury Avenue\Drawings\AutoCAD\Sheet\Q-5004-0001_C-DSGN.dwg

GENERAL PROJECT INFORMATION
PROJECT APPLICANT: BROMLEY-PORTSMOUTH, LLC

PROJECT NAME: PROPOSED BANK PAD
PROJECT MAP / LOT: MAP 216 / LOT 3

PROJECT ADDRESS: 1465 WOODNURY AVENUE
PORTSMOUTH, NH 03801
PROJECT LATITUDE: 43°-05'-15" N
PROJECT LONGITUDE: 70°-47'-20" W

PROJECT DESCRIPTION
THE PROJECT CONSISTS OF THE CONSTRUCTION OF A BANK PAD ALONG THE PARCEL FRONTAGE THAT CONSISTS OF A 2,500 SF BANK WITH A DRIVE-THROUGH AND ASSOCIATED SITE IMPROVEMENTS.
DISTURBED AREA
THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 0.78 ACRES.

SOIL CHARACTERISTICS
BASED ON THE NRCS WEB SOIL SURVEY FOR ROCKINGHAM COUNTY, NEW HAMPSHIRE, THE SOILS ON SITE PRIMARILY CONSIST OF URBAN LAND SOILS.

NAME OF RECEIVING WATERS
THE STORMWATER RUNOFF FROM THE SITE WILL BE DISCHARGED VIA A CLOSED DRAINAGE SYSTEM TO A DETENTION BASIN ON SITE, THAT WILL ULTIMATELY DISCHARGE INTO THE EXISTING CLOSED DRAINAGE SYSTEM WITHIN THE PROPERTY.

CONSTRUCTION SEQUENCE OF MAJOR ACTIVITIES:
1. CUT AND CLEAR TREES ACROSS SITE.
2. CONSTRUCT TEMPORARY AND PERMANENT SEDIMENT, EROSION AND DETENTION CONTROL FACILITIES. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATIONS THAT WILL INFLUENCE STORMWATER RUNOFF SUCH AS:
   2.1. DISPOSAL OF SEDIMENT SPOIL, STUMP, AND OTHER SOLID WASTE
   2.2. CONSTRUCTION OF PARKING AREAS
   2.3. CONTROL OF DUST
   2.4. INSTALLATION OF UTILITIES AND BUILDING CONSTRUCTION
   2.5. CONSTRUCTION DURING LATE WINTER AND EARLY SPRING
3. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT THE ENTIRETY OF CONSTRUCTION. REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS NEEDED.
4. NOTE THAT ALL PERMANENT DITCHES, SWALES, DETENTION, RETENTION AND SEDIMENTATION BASINS SHALL BE STABILIZED USING THE VEGETATIVE AND NON-STRUCTURAL BMPS PRIOR TO DIRECTING RUNOFF TO THEM.
5. DEMOLISH ALL SITE FEATURES AS DIRECTED ON THE DRAWINGS. CLEAR AND DISPOSE OF DEBRIS IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS.
6. CONSTRUCT TEMPORARY CULVERTS, DIVERSION CHANNELS, AND/OR BASINS AS REQUIRED. SEDIMENT TRAPS AND/OR BASINS SHALL BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED.
7. COMPLETE MASS GRADING AND EARTHWORK IN ORDER TO ESTABLISH SITE SUBGRADE ELEVATIONS, AS WELL AS EXCAVATION NECESSARY TO CONSTRUCT FOUNDATIONS FOR PROPOSED STRUCTURES.
8. CONSTRUCT UNDERGROUND DRAINAGE, UTILITY AND LIGHTING INFRASTRUCTURE NECESSARY TO SUPPORT TEMPORARY AND PERMANENT CONDITIONS. ALL TRENCHES TO BE BACKFILLED IN ACCORDANCE WITH PROJECT DRAWINGS AND SPECIFICATIONS.
9. ALL AREAS OF UNSTABILIZED SOIL SHALL BE TEMPORARILY STABILIZED AS SOON AS PRACTICABLE, BUT IN ALL CASES WITHIN 45 DAYS OF INITIAL DISTURBANCE, UNLESS A SHORTER TIME IS SPECIFIED BY LOCAL AUTHORITIES, THE CONSTRUCTION SEQUENCE APPROVED AS PART OF THE ISSUED PERMIT, OR AN INDEPENDENT MONITOR. ALL AREAS OF TEMPORARILY STABILIZED SOIL SHALL PERMANENTLY STABILIZED AS SOON AS PRACTICABLE BUT IN ALL CASES WITHIN 3 DAYS OF FINAL GRADING.
10. CONSTRUCT BASE COURSE GRAVELS FOR ALL ROADWAYS AND PARKING AREAS. ALL ROADS AND PARKING AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
11. BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES THAT HAVE NOT BEEN OTHERWISE STABILIZED BY GRAVELS SHALL BE SEEDED AND MULCHED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
12. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, PERIMETER EROSION CONTROL MEASURES, SEDIMENT TRAPS, ETC., MULCH AND SEED AS REQUIRED.
13. FINISH PAVING ALL ROADWAYS AND PARKING LOTS. CONSTRUCT ALL HARDSCAPE AND SITE AMENITIES/FEATURES.
14. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
15. REMOVE TRAPPED SEDIMENTS FROM ALL EROSION CONTROL MEASURES AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.

SPECIAL CONSTRUCTION NOTES:
1. THE CONSTRUCTION SEQUENCE MUST LIMIT THE DURATION AND AREA OF DISTURBANCE.
2. THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

EROSION CONTROL NOTES:
1. ALL EROSION CONTROL MEASURES AND PRACTICES SHALL CONFORM TO THE "NEW HAMPSHIRE STORMWATER MANUAL VOLUME 3: EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION" PREPARED BY THE NHDES.
2. PRIOR TO ANY WORK OR SOIL DISTURBANCE, CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR EROSION CONTROL MEASURES AS REQUIRED IN THE PROJECT MANUAL.
3. CONTRACTOR SHALL INSTALL TEMPORARY EROSION CONTROL BARRIERS, INCLUDING HAY BALES, SILT FENCES, MULCH BERMS, SILT SACKS AND SILT SOCKS AS SHOWN IN THESE DRAWINGS AS THE FIRST ORDER OF WORK.
4. SILT SACK INLET PROTECTION SHALL BE INSTALLED IN ALL EXISTING AND PROPOSED CATCH BASIN INLETS WITHIN THE WORK LIMITS AND BE MAINTAINED FOR THE DURATION OF THE PROJECT.
5. TEMPORARY WATER DIVERSION AND PERIMETER CONTROLS INCLUDING SILT FENCES, MULCH BERM, SILT SOCK, AND/OR HAY BALE BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT UNTIL NON-PAVED AREAS HAVE BEEN STABILIZED.
6. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
7. ALL DISTURBED AREAS NOT OTHERWISE BEING TREATED SHALL RECEIVE 6" LOAM, SEED AND FERTILIZER.
8. INSPECT ALL INLET PROTECTION AND PERIMETER CONTROLS WEEKLY AND AFTER EACH RAIN STORM OF 0.25 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.
9. CONSTRUCT EROSION CONTROL BLANKETS ON ALL SLOPES STEEPER THAN 3:1.

STABILIZATION:
1. AN AREA SHALL BE CONSIDERED STABLE WHEN ONE OF THE FOLLOWING HAS OCCURRED:
   A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
   B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
   C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED;
   D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.;
   E. IN AREAS TO BE PAVED, "STABLE" MEANS THAT BASE COURSE GRAVELS MEETING THE REQUIREMENTS OF NHDOT STANDARD FOR ROAD AND BRIDGE CONSTRUCTION, 2016, ITEM 304.2 HAVE BEEN INSTALLED.
2. WINTER STABILIZATION PRACTICES:
   A. ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS;
   B. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS;
   C. AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT;
3. STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES, AND DISTURBED AREAS, WHERE CONSTRUCTION ACTIVITY SHALL NOT OCCUR FOR MORE THAN TWENTY-ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA. STABILIZATION MEASURES TO BE USED INCLUDE:
   A. TEMPORARY SEEDING;
   B. MULCHING.
4. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
5. WHEN CONSTRUCTION ACTIVITY PERMANENTLY OR TEMPORARILY CEASES WITHIN 100 FEET OF NEARBY SURFACE WATERS OR DELINEATED WETLANDS, THE AREA SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OR PRIOR TO A RAIN EVENT. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN THESE AREAS, SILT FENCES, MULCH BERMS, HAY BALE BARRIERS AND ANY EARTH/DIKES SHALL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED.
6. DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH SILT FENCES, MULCH BERMS, HAY BALE BARRIERS, OR SILT SOCKS. ALL STORM DRAIN BASIN INLETS SHALL BE PROVIDED WITH FLARED END SECTIONS AND TRASH RACKS. THE SITE SHALL BE STABILIZED FOR THE WINTER BY OCTOBER 15.

DUST CONTROL:
1. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST THROUGHOUT THE CONSTRUCTION PERIOD.
2. DUST CONTROL METHODS SHALL INCLUDE, BUT BE NOT LIMITED TO SPRINKLING WATER ON EXPOSED AREAS, COVERING LOADED DUMP TRUCKS LEAVING THE SITE, AND TEMPORARY MULCHING.
3. DUST CONTROL MEASURES SHALL BE UTILIZED SO AS TO PREVENT THE MIGRATION OF DUST FROM THE SITE TO ABUTTING AREAS.

STOCKPILES:
1. LOCATE STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CATCH BASINS, SWALES, AND CULVERTS.
2. ALL STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY EROSION CONTROL MEASURES PRIOR TO THE ONSET OF PRECIPITATION.
3. PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIALS FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHOULD BE INSPECTED AT THE END OF EACH WORKING DAY.
4. PROTECT ALL STOCKPILES FROM STORMWATER RUN-OFF USING TEMPORARY EROSION CONTROL MEASURES SUCH AS BERMS, SILT SOCK, OR OTHER APPROVED PRACTICE TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILES.

OFF SITE VEHICLE TRACKING:
1. THE CONTRACTOR SHALL CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE(S) PRIOR TO ANY EXCAVATION ACTIVITIES.

VEGETATION:
1. TEMPORARY GRASS COVER:
   A. SEEDBED PREPARATION:
      a. APPLY FERTILIZER AT THE RATE OF 600 POUNDS PER ACRE OF 10-10-10. APPLY LIMESTONE (EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF THREE (3) TONS PER ACRE;
   B. SEEDING:
      a. UTILIZE ANNUAL RYE GRASS AT A RATE OF 40 LBS/ACRE;
      b. WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF TWO (2) INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED;
      c. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). HYDROSEEDINGS, WHICH INCLUDE MULCH, MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED 10% WHEN HYDROSEEDING;
   C. MAINTENANCE:
      a. TEMPORARY SEEDING SHALL BE PERIODICALLY INSPECTED. AT A MINIMUM, 95% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND OTHER TEMPORARY MEASURES USED IN THE INTERIM (MULCH, FILTER BARRIERS, CHECK DAMS, ETC.).
2. VEGETATIVE PRACTICE:
   A. FOR PERMANENT MEASURES AND PLANTINGS:
      a. LIMESTONE SHALL BE THOROUGHLY INCORPORATED INTO THE LOAM LAYER AT A RATE OF THREE (3) TONS PER ACRE IN ORDER TO PROVIDE A PH VALUE OF 5.5 TO 6.5;
      b. FERTILIZER SHALL BE SPREAD ON THE TOP LAYER OF LOAM AND WORKED INTO THE SURFACE. FERTILIZER APPLICATION RATE SHALL BE 800 POUNDS PER ACRE OF 10-20-20 FERTILIZER;
      c. SOIL CONDITIONERS AND FERTILIZER SHALL BE APPLIED AT THE RECOMMENDED RATES AND SHALL BE THOROUGHLY WORKED INTO THE LOAM. LOAM SHALL BE RAKED UNTIL THE SURFACE IS FINELY PULVERIZED, SMOOTH AND EVEN, AND THEN COMPACTED TO AN EVEN SURFACE CONFORMING TO THE REQUIRED LINES AND GRADES WITH APPROVED ROLLERS WEIGHING BETWEEN 4-1/2 POUNDS AND 5-1/2 POUNDS PER INCH OF WIDTH;
      d. SEED SHALL BE SOWN AT THE RATE SHOWN BELOW. SOWING SHALL BE DONE ON A CALM, DRY DAY, PREFERABLY BY MACHINE, BUT IF BY HAND, ONLY BY EXPERIENCED WORKMEN. IMMEDIATELY BEFORE SEEDING, THE SOIL SHALL BE LIGHTLY RAKED. ONE HALF THE SEED SHALL BE SOWN IN ONE DIRECTION AND THE OTHER HALF AT RIGHT ANGLES TO THE ORIGINAL DIRECTION. IT SHALL BE LIGHTLY RAKED INTO THE SOIL TO A DEPTH NOT OVER 1/4 INCH AND ROLLED WITH A HAND ROLLER WEIGHING NOT OVER 100 POUNDS PER LINEAR FOOT OF WIDTH;
      e. HAY MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING AS INDICATED ABOVE;
      f. THE SURFACE SHALL BE WATERED AND KEPT MOIST WITH A FINE SPRAY AS REQUIRED, WITHOUT WASHING AWAY THE SOIL, UNTIL THE GRASS IS WELL ESTABLISHED. ANY AREAS WHICH ARE NOT SATISFACTORILY COVERED WITH GRASS SHALL BE RESEEDED, AND ALL NOXIOUS WEEDS REMOVED;
      g. THE CONTRACTOR SHALL PROTECT AND MAINTAIN THE SEEDED AREAS UNTIL ACCEPTED;
      h. A GRASS SEED MIXTURE CONTAINING THE FOLLOWING SEED REQUIREMENTS SHALL BE APPLIED AT THE INDICATED RATE:

SEED MIX	APPLICATION RATE
CREEPING RED FESCUE	20 LBS/ACRE
TALL FESCUE	20 LBS/ACRE
REDTOP	2 LBS/ACRE

IN NO CASE SHALL THE WEED CONTENT EXCEED ONE (1) PERCENT BY WEIGHT. ALL SEED SHALL COMPLY WITH STATE AND FEDERAL SEED LAWS. SEEDING SHALL BE DONE NO LATER THAN SEPTEMBER 15. IN NO CASE SHALL SEEDING TAKE PLACE OVER SNOW.
3. DORMANT SEEDING (SEPTEMBER 15 TO FIRST SNOWFALL):
   A. FOLLOW PERMANENT MEASURES SLOPE, LIME, FERTILIZER AND GRADING REQUIREMENTS. APPLY SEED MIXTURE AT TWICE THE INDICATED RATE. APPLY MULCH AS INDICATED FOR PERMANENT MEASURES.

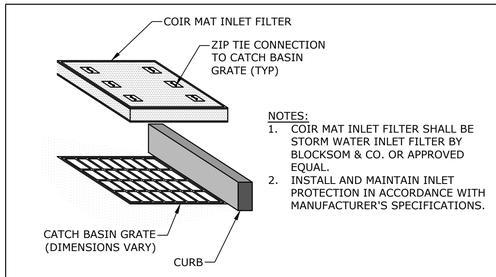
CONCRETE WASHOUT AREA:
   A. THE CONCRETE DELIVERY TRUCKS SHALL, WHENEVER POSSIBLE, USE WASHOUT FACILITIES AT THEIR OWN PLANT OR DISPATCH FACILITY;
   B. IF IT IS NECESSARY, SITE CONTRACTOR SHALL DESIGNATE SPECIFIC WASHOUT AREAS AND DESIGN FACILITIES TO HANDLE ANTICIPATED WASHOUT WATER;
   C. CONTRACTOR SHALL LOCATE WASHOUT AREAS AT LEAST 150 FEET AWAY FROM STORM DRAINS, SWALES AND SURFACE WATERS OR DELINEATED WETLANDS;
   D. INSPECT WASHOUT FACILITIES DAILY TO DETECT LEAKS OR TEARS AND TO IDENTIFY WHEN MATERIALS NEED TO BE REMOVED.

ALLOWABLE NON-STORMWATER DISCHARGES:
1. THE FOLLOWING ARE THE ONLY NON-STORMWATER DISCHARGES ALLOWED. ALL OTHER NON-STORMWATER DISCHARGES ARE PROHIBITED ON SITE:
   1.1. FIRE-FIGHTING ACTIVITIES;
   1.2. FIRE HYDRANT FLUSHING;
   1.3. WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED;
   1.4. WATER USED TO CONTROL DUST;
   1.5. POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHING;
   1.6. ROUTINE EXTERNAL BUILDING WASH DOWN WHERE DETERGENTS ARE NOT USED;
   1.7. PAVEMENT WASH WATERS WHERE DETERGENTS ARE NOT USED;
   1.8. UNCONTAMINATED AIR CONDITIONING/COMPRESSOR CONDENSATION;
   1.9. UNCONTAMINATED GROUND WATER OR SPRING WATER;
   1.10. FOUNDATION OR FOOTING DRAINS WHICH ARE UNCONTAMINATED;
   1.11. UNCONTAMINATED EXCAVATION DEWATERING;
   1.12. LANDSCAPE IRRIGATION.

WASTE DISPOSAL:
1. WASTE MATERIAL:
   A. ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN A DUMPSTER;
   B. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE;
   C. ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT.
2. HAZARDOUS WASTE:
   A. ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER;
   B. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.
3. SANITARY WASTE:
   A. ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

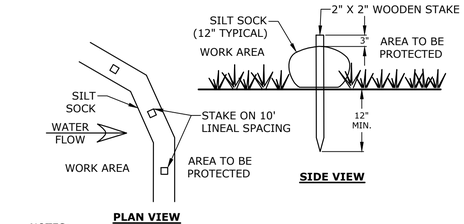
SPILL PREVENTION:
1. CONTRACTOR SHALL BE FAMILIAR WITH SPILL PREVENTION MEASURES REQUIRED BY LOCAL, STATE AND FEDERAL AGENCIES. AT A MINIMUM, CONTRACTOR SHALL FOLLOW THE BEST MANAGEMENT SPILL PREVENTION PRACTICES OUTLINED BELOW.
2. THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES DURING CONSTRUCTION TO STORMWATER RUNOFF:
   A. GOOD HOUSEKEEPING - THE FOLLOWING GOOD HOUSEKEEPING PRACTICE SHALL BE FOLLOWED ON SITE DURING CONSTRUCTION:
      a. ONLY SUFFICIENT AMOUNTS OF PRODUCTS TO DO THE JOB SHALL BE STORED ON SITE;
      b. ALL REGULATED MATERIALS STORED ON SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE, ON AN IMPERVIOUS SURFACE;
      c. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED;
      d. THE SITE SUPERINTENDENT SHALL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS;
      e. SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER;
      f. WHENEVER POSSIBLE ALL OF A PRODUCT SHALL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
      g. THE TRAINING OF ON-SITE EMPLOYEES AND THE ON-SITE POSTING OF RELEASE RESPONSE INFORMATION DESCRIBING WHAT TO DO IN THE EVENT OF A SPILL OF REGULATED SUBSTANCES.
   B. HAZARDOUS PRODUCTS - THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:
      a. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE;
      b. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHALL BE RETAINED FOR IMPORTANT PRODUCT INFORMATION;
      c. SURPLUS PRODUCT THAT MUST BE DISPOSED OF SHALL BE DISCARDED ACCORDING TO THE MANUFACTURER'S RECOMMENDED METHODS OF DISPOSAL.
   C. PRODUCT SPECIFIC PRACTICES - THE FOLLOWING PRODUCT SPECIFIC PRACTICES SHALL BE FOLLOWED ON SITE:
      a. PETROLEUM PRODUCTS:
      i. ALL ON SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE LEAKAGE;
      ii. PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT BASED SUBSTANCES USED ON SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
      iii. SECURE FUEL STORAGE AREAS AGAINST UNAUTHORIZED ENTRY;
      iv. INSPECT FUEL STORAGE AREAS WEEKLY;
      v. WHEREVER POSSIBLE, KEEP REGULATED CONTAINERS THAT ARE STORED OUTSIDE MORE THAN 50 FEET FROM SURFACE WATER AND STORM DRAINS, 75 FEET FROM PRIVATE WELLS, AND 400 FEET FROM PUBLIC WELLS;
      vi. COVER REGULATED CONTAINERS IN OUTSIDE STORAGE AREAS;
      vii. SECONDARY CONTAINMENT IS REQUIRED FOR CONTAINERS CONTAINING REGULATED SUBSTANCES STORED OUTSIDE, EXCEPT FOR ON PREMISE USE HEATING FUEL TANKS, OR ABOVEGROUND OR UNDERGROUND STORAGE TANKS OTHERWISE REGULATED.
      viii. THE FUEL HANDLING REQUIREMENTS SHALL INCLUDE:
         (1) EXCEPT WHEN IN USE, KEEP CONTAINERS CONTAINING REGULATED SUBSTANCES CLOSED AND SEALED;
         (2) PLACE DRIP PANS UNDER SPIGOTS, VALVES, AND PUMPS;
         (3) HAVE SPILL CONTROL AND CONTAINMENT EQUIPMENT READILY AVAILABLE IN ALL WORK AREAS;
         (4) USE FUNNELS AND DRIP PANS WHEN TRANSFERRING REGULATED SUBSTANCES;
         (5) PERFORM TRANSFERS OF REGULATED SUBSTANCES OVER AN IMPERVIOUS SURFACE.
      ix. FUELING AND MAINTENANCE OF EXCAVATION, EARTHMOVING AND OTHER CONSTRUCTION RELATED EQUIPMENT SHALL COMPLY WITH THE REGULATIONS OF THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES THESE REQUIREMENTS ARE SUMMARIZED IN WD-DWGB-22-6 BEST MANAGEMENT PRACTICES FOR FUELING AND MAINTENANCE OF EXCAVATION AND EARTHMOVING EQUIPMENT, OR ITS SUCCESSOR DOCUMENT.
      HTTPS://WWW.DES.NH.GOV/ORGANIZATION/COMMISSIONER/PIP/FACTSHEETS/DWGB/DOCUMENTS/DWGB-22-6.PDF
      b. FERTILIZERS:
      i. FERTILIZERS USED SHALL BE APPLIED ONLY IN THE MINIMUM AMOUNTS DIRECTED BY THE SPECIFICATIONS;
      ii. ONCE APPLIED FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER;
      iii. STORAGE SHALL BE IN A COVERED SHED OR ENCLOSED TRAILERS. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
      c. PAINTS:
      i. ALL CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE;
      ii. EXCESS PAINT SHALL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM;
      iii. EXCESS PAINT SHALL BE DISPOSED OF PROPERLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.
   D. SPILL CONTROL PRACTICES - IN ADDITION TO GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTION, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:
      a. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES;
      b. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE. EQUIPMENT AND MATERIALS SHALL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST AND PLASTIC OR METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE;
      c. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY;
      d. THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL SHALL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE;
      e. SPILLS OF TOXIC OR HAZARDOUS MATERIAL SHALL BE REPORTED TO THE APPROPRIATE LOCAL, STATE OR FEDERAL AGENCIES AS REQUIRED;
      f. THE SITE SUPERINTENDENT RESPONSIBLE FOR DAY-TO-DAY SITE OPERATIONS SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR.
   E. VEHICLE FUELING AND MAINTENANCE PRACTICE:
      a. CONTRACTOR SHALL MAKE AN EFFORT TO PERFORM EQUIPMENT/VEHICLE FUELING AND MAINTENANCE AT AN OFF-SITE FACILITY;
      b. CONTRACTOR SHALL PROVIDE AN ON-SITE FUELING AND MAINTENANCE AREA THAT IS CLEAN AND DRY;
      c. IF POSSIBLE THE CONTRACTOR SHALL KEEP AREA COVERED;
      d. CONTRACTOR SHALL KEEP A SPILL KIT AT THE FUELING AND MAINTENANCE AREA;
      e. CONTRACTOR SHALL REGULARLY INSPECT VEHICLES FOR LEAKS AND DAMAGE;
      f. CONTRACTOR SHALL USE DRIP PANS, DRIP CLOTHS, OR ABSORBENT PADS WHEN REPLACING SPENT FLUID.

EROSION CONTROL OBSERVATIONS AND MAINTENANCE PRACTICES
   A. THIS PROJECT DOES NOT EXCEED ONE (1) ACRE OF DISTURBANCE AND THUS DOES NOT REQUIRES A SWPPP.



NOTES:
1. COIR MAT INLET FILTER SHALL BE STORM WATER INLET FILTER BY BLOCKSOM & CO. OR APPROVED EQUAL.
2. INSTALL AND MAINTAIN INLET PROTECTION IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

INLET PROTECTION BARRIER
NO SCALE



NOTES:
1. SILT SOCK SHALL BE SILT SOXX BY FILTREXX OR APPROVED EQUAL.
2. INSTALL SILT SOCK IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

SILT SOCK
NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE – PATRICK CRIMMINS – No. 12378 – LICENSED PROFESSIONAL ENGINEER
7/30/25

STATE OF NEW HAMPSHIRE – NEIL A HANSEN – No. 15227 – LICENSED PROFESSIONAL ENGINEER
07/30/2025

PROPOSED BANK PAD

BROMLEY-PORTSMOUTH, LLC &
RCQ-PORTSMOUTH, LLC
c/o QUINCY & COMPANY, INC.

1465 WOODBURY AVE
PORTSMOUTH, NH

MARK	DATE	DESCRIPTION
B	7/30/2025	PB Submission
A	6/16/2025	TAC Submission

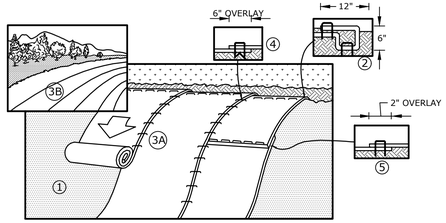
PROJECT NO:	Q5004-0001
DATE:	6/16/2025
FILE:	Q-5004-0001-C-DTLS.dwg
DRAWN BY:	NHW
DESIGNED/CHECKED BY:	NAH
APPROVED BY:	PMC

EROSION CONTROL NOTES AND DETAILS SHEET

SCALE: AS SHOWN

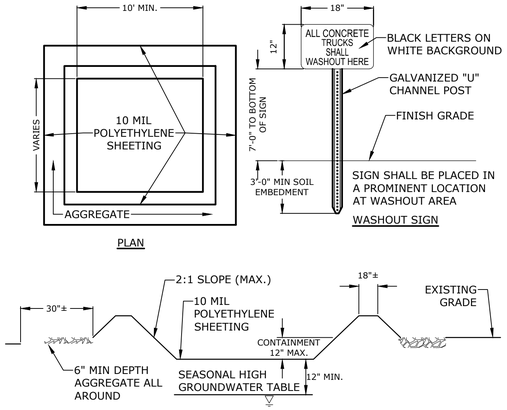
C-501

Last Saved: 6/16/2025
Printed: 6/16/2025 - 3:48pm By: NWilcox
Tighe & Bond: J:\Q\Q5004 Quincy & Company, Inc\0001_1465 Woodbury Avenue\Drawings\AutoCAD\Sheet\Q-5004-0001-C-DTLS.dwg



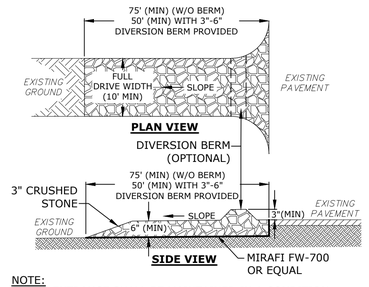
NOTES:
1. EROSION CONTROL BLANKET SHALL BE AN ALL NATURAL PRODUCT WITH NO PHOTO DEGRADABLE COMPONENTS, NORTH AMERICAN GREEN SC150BN OR APPROVED EQUAL.
2. STAKES SHALL BE BIODEGRADABLE BIOSTAKES OR ALL NATURAL WOOD ECOSTAKES OR APPROVED EQUAL. THE LENGTH OF STAKES SHALL BE BASED OFF OF THE MANUFACTURERS RECOMMENDATION.
3. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, COMPOST AND SEED.
4. BEGIN AT THE TOP OF THE SLOPE, 36" OVER THE GRADE BREAK, BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UPSLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAKES IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAKING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAKES ACROSS THE WIDTH OF THE BLANKET.
5. ROLL THE BLANKETS DOWN THE SLOPE. ALL BLANKETS MUST BE SECURELY FASTENED TO THE SOIL SURFACE BY PLACING STAKES IN APPROPRIATE LOCATIONS AS SHOWN ON THE MANUFACTURERS PATTERN GUIDE.
6. THERE SHALL BE NO PLASTIC, OR MULTI-FILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING OR MESH WITH AN OPENING SIZE OF GREATER THAN 1/8 INCHES MATERIAL UTILIZED.

EROSION CONTROL BLANKET
NO SCALE



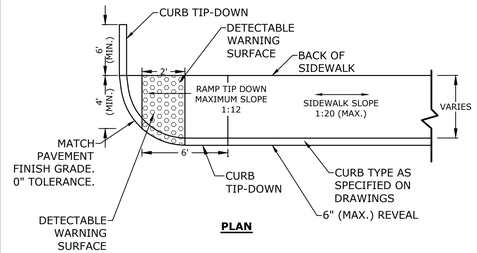
NOTES:
1. CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL.
4. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
5. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
6. AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.

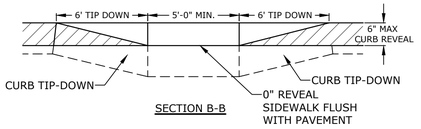
CONCRETE WASHOUT AREA
NO SCALE

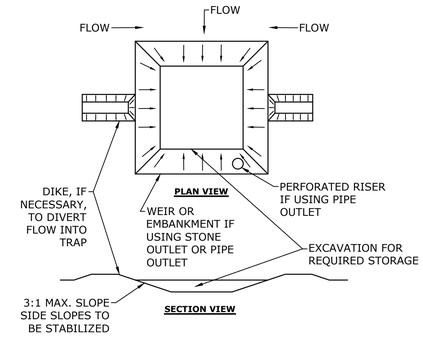


NOTE:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT FROM THE SITE. WHEN WASHING IS REQUIRED, IT SHALL BE DONE SO RUNOFF DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS

STABILIZED CONSTRUCTION EXIT
NO SCALE

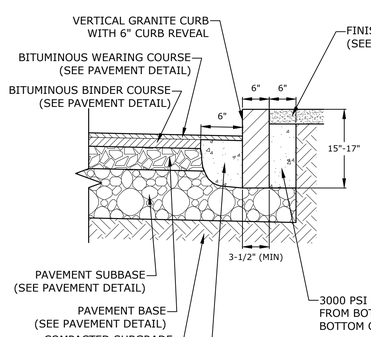






NOTES:
1. THE TRAP SHALL BE INSTALLED AS CLOSE TO THE DISTURBED AREA AS POSSIBLE.
2. THE MAXIMUM CONTRIBUTING AREA TO A SINGLE TRAP SHALL BE LESS THAN 5 ACRES.
3. THE MINIMUM VOLUME OF THE TRAP SHALL BE 3,600 CUBIC FEET OF STORAGE FOR EACH ACRE OF DRAINAGE AREA.
4. TRAP OUTLET SHALL BE MINIMUM OF ONE FOOT BELOW THE CREST OF THE TRAP.
5. TRAP SHALL DISCHARGE TO A STABILIZED AREA.
6. TRAP SHALL BE CLEANED WHEN 50 PERCENT OF THE ORIGINAL VOLUME IS FILLED.
7. MATERIALS REMOVED FROM THE TRAP SHALL BE PROPERLY DISPOSED OF AND STABILIZED.
8. SEDIMENT TRAPS MUST BE USED AS NEEDED TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED.

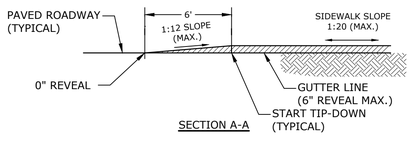
SEDIMENT TRAP
NO SCALE

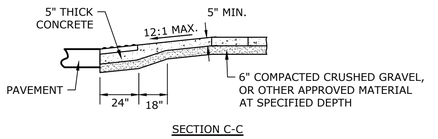


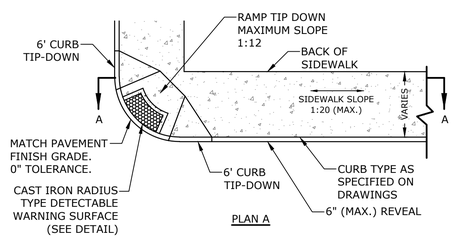
CURB RADIUS TABLE	
RADIUS	MAX. LENGTH
<20'	USE CURVED CURB
21'	3'
22'-28'	4'
29'-35'	5'
36'-42'	6'
43'-49'	7'
50'-56'	8'
57'-60'	9'
>60'	10'

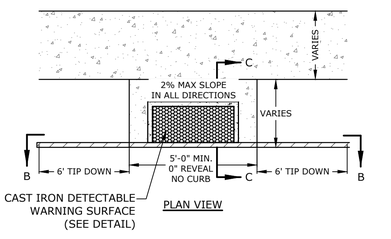
NOTES:
1. SEE SITE PLAN(S) FOR LIMITS OF VERTICAL GRANITE CURB (VGC).
2. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
3. MINIMUM LENGTH OF STRAIGHT CURB STONES = 3'
4. MAXIMUM LENGTH OF STRAIGHT CURB STONES = 10'
5. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES (SEE TABLE).
6. ALL RADII 20 FEET AND SMALLER SHALL BE CONSTRUCTED USING CURVED SECTIONS.
7. JOINTS BETWEEN STONES SHALL HAVE A MAXIMUM SPACING OF 1/2" AND SHALL BE MORTARED.

VERTICAL GRANITE CURB
NO SCALE



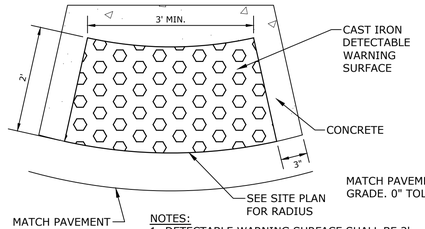


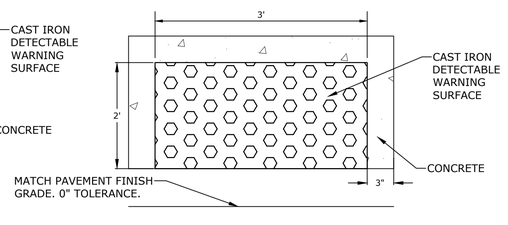




NOTES:
1. RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT AND LOCAL AND STATE REQUIREMENTS.
2. A 6" COMPACTED CRUSHED GRAVEL BASE (NHDOT ITEM No. 304.3) SHALL BE PROVIDED BENEATH RAMPS.
3. DETECTABLE WARNING PANEL SHALL BE CAST IRON SET IN CONCRETE (SEE DETAIL.)
4. LOCATE THE DETECTABLE WARNING SURFACES AT THE BACK OF THE CURB ALONG THE EDGE OF THE LANDING.
5. THE MAXIMUM RUNNING SLOPE OF ANY SIDEWALK CURB RAMP IS 12:1, THE MAXIMUM CROSS SLOPE IS 2%. THE SLOPE OF THE LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION.
6. TRANSITIONS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. ROADWAY SHOULDER SLOPES ADJOINING SIDEWALK CURB RAMPS SHALL BE A MAXIMUM OF 5% (FULL WIDTH) FOR A DISTANCE OF 2 FT. FROM THE ROADWAY CURBLINE.
7. THE BOTTOM OF THE SIDEWALK CURB RAMP OR LANDING, EXCLUSIVE OF THE FLARED SIDES, SHALL BE WHOLLY CONTAINED WITHIN THE CROSSWALK MARKINGS.
8. DETECTABLE WARNING PANELS SHALL BE A MINIMUM OF 2 FEET IN DEPTH. THE ROWS OF TRUNCATED DOMES SHALL BE ALIGNED PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP, BLENDED TRANSITION, OR LANDING AND THE STREET.
9. THE TEXTURE OF THE DETECTABLE WARNING FEATURE MUST CONTRAST VISUALLY WITH THE SURROUNDING SURFACES (EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT).

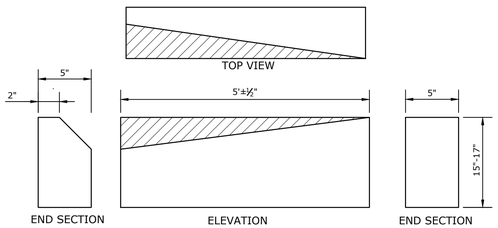
CONCRETE WHEELCHAIR ACCESSIBLE RAMP
NO SCALE





NOTES:
1. DETECTABLE WARNING SURFACE SHALL BE 2' X 3' CAST IRON PANEL SET IN CONCRETE.
2. DETECTABLE WARNING SURFACE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

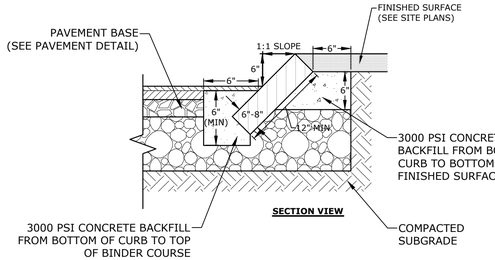
CAST IRON DETECTABLE WARNING SURFACE
NO SCALE



MOUNTABLE VERTICAL GRANITE CURB TO VERTICAL GRANITE CURB

NOTES:
1. THE INTENT OF THIS ITEM IS TO PROVIDE A SMOOTH TRANSITION BETWEEN VERTICAL GRANITE CURB AND MOUNTABLE VERTICAL GRANITE CURB WITHOUT REQUIRING FIELD CHIPPING DURING INSTALLATION. THE MOUNTABLE VERTICAL GRANITE CURB MAY REQUIRE ADJUSTMENTS TO MEET THE TRANSITION PIECE HEIGHT. TRANSITION SLOPE CURB TO STANDARD REVEAL AS QUICKLY AS POSSIBLE TO PROVIDE FOR THIS SMOOTH TRANSITION.

CURB TRANSITION
NO SCALE



CURB RADIUS TABLE	
RADIUS	MAX LENGTH
<2'	USE CURVED CURB
2'-15'	USE RADIAL JOINTS
16'-28'	1'-6"
29'-41	2'
42'-55'	3'
56'-68'	4'
69'-82'	5'
83'-96'	6'
97'-110'	7'
>110'	8'

NOTES:
1. SEE SITE PLAN(S) FOR LIMITS OF SLOPED GRANITE CURB (SGC).
2. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
3. MINIMUM LENGTH OF STRAIGHT CURB STONES = 18"
4. MAXIMUM LENGTH OF STRAIGHT CURB STONES = 8'
5. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES (SEE TABLE).
6. JOINTS BETWEEN STONES SHALL HAVE A MAXIMUM SPACING OF 1/2" AND SHALL BE MORTARED.

SLOPED GRANITE CURB
NO SCALE

Tighe&Bond

PATRICK CRIMMINS — No. 12378 — LICENSED PROFESSIONAL ENGINEER — STATE OF NEW HAMPSHIRE
7/30/25

NEIL A HANSEN — No. 15227 — LICENSED PROFESSIONAL ENGINEER — STATE OF NEW HAMPSHIRE
07/30/2025

PROPOSED BANK PAD

BROMLEY-PORTSMOUTH, LLC &
RCQ-PORTSMOUTH, LLC
c/o QUINCY & COMPANY, INC.

1465 WOODBURY AVE
PORTSMOUTH, NH

MARK	DATE	DESCRIPTION
B	7/30/2025	PB Submission
A	6/16/2025	TAC Submission

PROJECT NO:	Q5004-0001
DATE:	6/16/2025
FILE:	Q-5004-0001-C-DTLS.dwg
DRAWN BY:	NHW
DESIGNED/CHECKED BY:	NAH
APPROVED BY:	PMC

DETAILS SHEET

SCALE: AS SHOWN

C-502

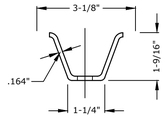
Last Saved: 6/16/2025
Printed: Jul 16, 2025 - 3:08pm By: NWilcox
Tighe & Bond:J:\Q\Q5004 Quincy & Company, Inc\0001_1465 Woodbury Avenue\Drawings\AutoCAD\Sheet\Q-5004-0001-C-DTLS.dwg

R7-8P
18" X 9"
GREEN ON WHITE

R7-8
12" X 18"
BLUE AND GREEN
ON WHITE

R5-1
30"X30"
WHITE ON RED
BORDERED BY WHITE

R1-1
30"X30"
WHITE ON RED



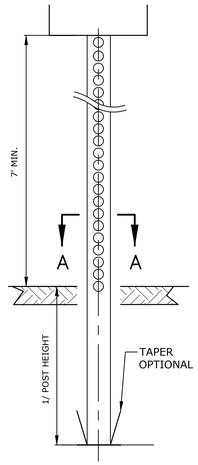
SECTION A-A

R8-3a
18"X24"
RED ON WHITE

PKE-31426
18"X12"
RED ON WHITE
BORDERED BY RED

PKE-31424
18"X12"
RED ON WHITE
BORDERED BY RED

R6-1L
36"X12"
BLACK ON WHITE ARROW
ON BLACK BACKGROUND
BORDERED BY WHITE



* IN LEDGE DRILL & GROUT TO A MIN OF 2'

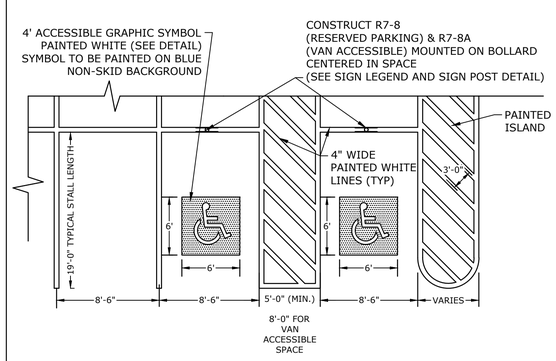
LENGTH: AS REQUIRED
WEIGHT PER LINEAR FOOT: 2.50 LBS (MIN.)
HOLES: 3/8" DIAMETER, 1" C-C FULL LENGTH
STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASSTM A-576 (GRADE 1070 - 1080)

FINISH: SHALL BE PAINTED WITH TWO COATS OF AN APPROVED BLACK BAKED ON OR DRIED, PAINT OF WEATHER RESISTANT QUALITY. ALL FABRICATION SHALL BE COMPLETE BEFORE PAINTING.

NOTE:
ALL SIGNS TO BE INSTALLED AS INDICATED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

SIGN LEGEND AND SIGN POST

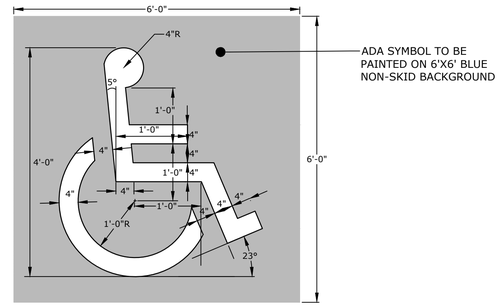
NO SCALE



NOTES:
1. ALL PAINT SHALL BE FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248-TYPE F. PAINT SHALL BE APPLIED AS SPECIFIED BY MANUFACTURER.
2. SYMBOLS & PARKING STALLS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT AND LOCAL AND STATE REQUIREMENTS.
3. FINISH PAVEMENT GRADES AT ALL HANDICAP ACCESSIBLE STALLS AND PAINTED ACCESS AISLES SHALL NOT EXCEED 2% IN ANY DIRECTION.

PARKING STALL/PAINTED ISLAND STRIPING

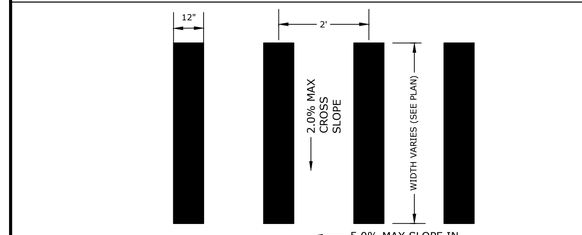
NO SCALE



NOTES:
1. SYMBOL SHALL BE CONSTRUCTED IN ALL ACCESSIBLE SPACES USING FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248-TYPE F. PAINT SHALL BE APPLIED AS SPECIFIED BY MANUFACTURER.
2. SYMBOL SHALL BE CONSTRUCTED TO THE LATEST ADA, STATE AND LOCAL REQUIREMENTS.

ACCESSIBLE SYMBOL

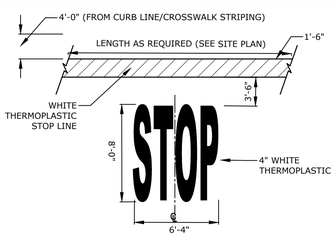
NO SCALE



NOTE:
1. STRIPING SHALL BE CONSTRUCTED USING WHITE THERMO PLASTIC, REFLECTERIZED PAVEMENT MARKING MATERIAL MEETING THE REQUIREMENTS OF ASTM D 4505

CROSSWALK STRIPING

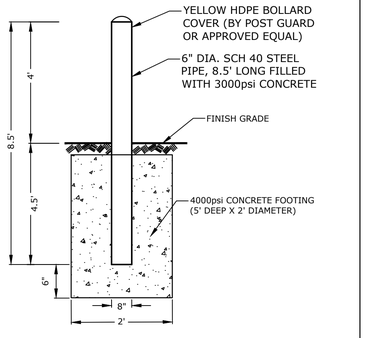
NO SCALE



NOTE:
1. PAVEMENT MARKINGS TO BE INSTALLED IN LOCATIONS AS SHOWN ON SITE PLAN.
2. STRIPING SHALL BE CONSTRUCTED USING WHITE THERMO PLASTIC, REFLECTERIZED PAVEMENT MARKING MATERIAL MEETING THE REQUIREMENTS OF ASTM D 4505

STOP BAR AND LEGEND

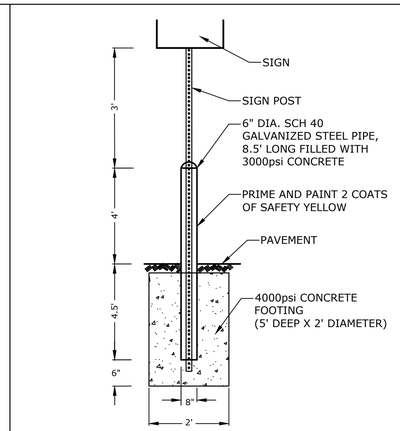
NO SCALE



NOTE:
1. COORDINATE WITH EVERSOURCE TO VERIFY THAT BOLLARD, FOOTING, AND BOLLARD COVER MEET EVERSOURCE REQUIREMENTS.

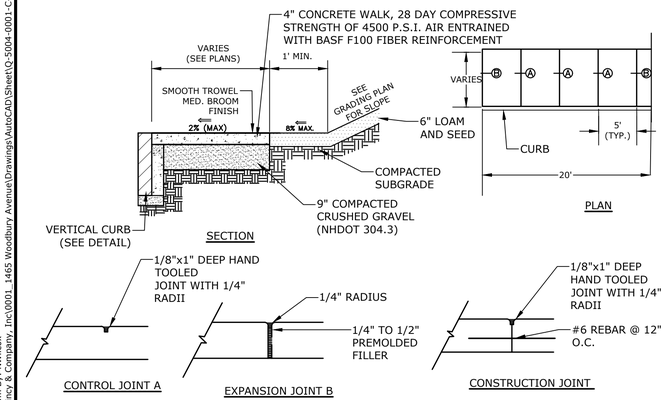
BOLLARD DETAIL

NO SCALE



BOLLARD MOUNTED SIGN DETAIL

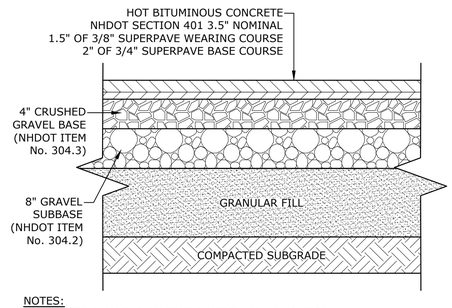
NO SCALE



NOTES:
1. SIDEWALK SHALL BE CONSTRUCTED TO CITY OF PORTSMOUTH STANDARDS

CONCRETE SIDEWALK WITH GRANITE CURB

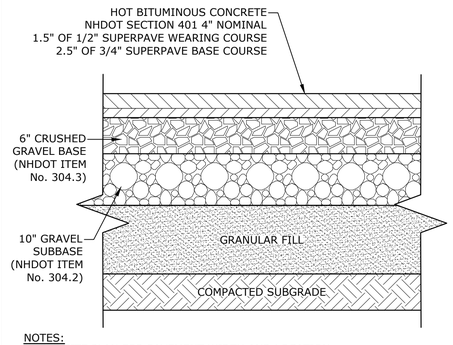
NO SCALE



NOTES:
1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
2. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
3. A TACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE PAVEMENT PRIOR TO PLACING WEARING COURSE.

ON-SITE PAVEMENT SECTION

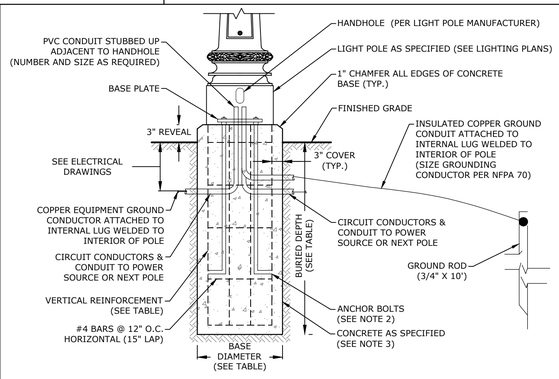
NO SCALE



NOTES:
1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
2. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
3. A TACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE PAVEMENT PRIOR TO PLACING WEARING COURSE.

OFF-SITE PAVEMENT SECTION

NO SCALE



POLE HEIGHT	DEPTH (BURIED)	BASE DIAMETER	VERTICAL REINFORCEMENT
<16'	72" (MIN.)	18"	6 - #6
>16'	72" (MIN.)	24"	6 - #8

NOTES:
1. ALL LIGHT POLES, LUMINARIES AND WIRE TO BE FURNISHED BY THE CONTRACTOR UNLESS OTHERWISE DIRECTED.
2. CONTRACTOR SHALL VERIFY BOLT TEMPLATE AND ANCHOR BOLT SIZE WITH POLE MANUFACTURER PRIOR TO CONSTRUCTION.
3. CONCRETE SHALL BE 4,000 PSI CLASS A, PRE-CAST CONCRETE.
4. REINFORCEMENT SHALL BE ASTM A615, GRADE 60.
5. FOR LIGHT POLES GREATER THAN 20' IN HEIGHT, THE LIGHT POLE BASE SHALL BE DESIGNED AND STAMPED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE.

TYPICAL LIGHT POLE BASE

NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE – PATRICK CRIMMINS – No. 12378 – LICENSED PROFESSIONAL ENGINEER
7/30/25

STATE OF NEW HAMPSHIRE – NEIL A HANSEN – No. 15227 – LICENSED PROFESSIONAL ENGINEER
07/30/2025

PROPOSED BANK PAD

BROMLEY-PORTSMOUTH, LLC &
RCQ-PORTSMOUTH, LLC
c/o QUINCY & COMPANY, INC.

1465 WOODBURY AVE
PORTSMOUTH, NH

MARK	DATE	DESCRIPTION
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A	6/16/2025	TAC Submission

PROJECT NO:	Q5004-0001
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DRAWN BY:	NHW
DESIGNED/CHECKED BY:	NAH
APPROVED BY:	PMC

DETAILS SHEET

SCALE: AS SHOWN

C-503

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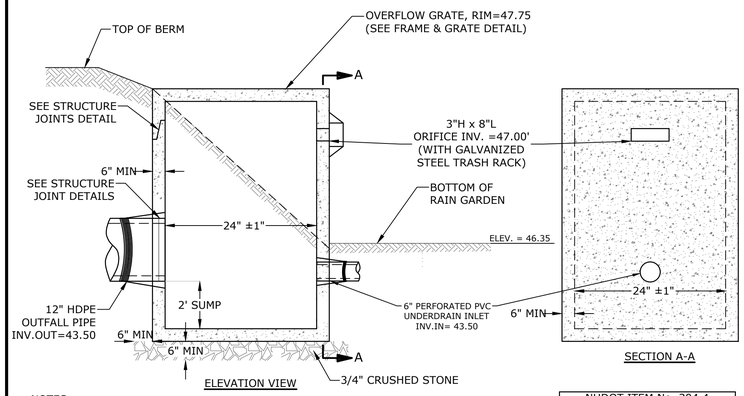
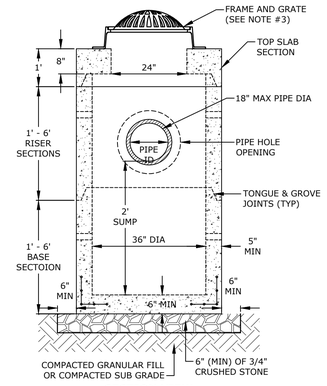


NOTES:
1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE (TYPE II CEMENT).
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER OF THE WALL.
3. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.
4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
5. ALL JOINTS ON THE STRUCTURE AND PIPING SHALL BE WATERTIGHT.

NHDOT ITEM No. 304.4 (CRUSHED STONE - FINE)	
SIEVE SIZE	% PASSING
2"	100
1-1/2"	85-100
3/4"	45-75
#4	10-45
#200	0-5

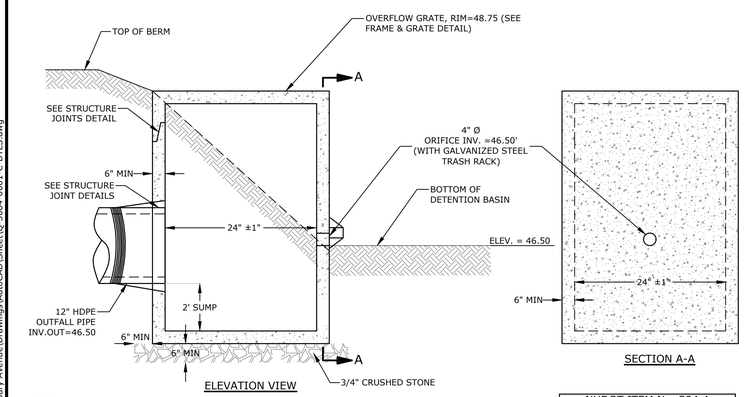
OUTLET CONTROL STRUCTURE 1 (POS 1)
NO SCALE



SECTION VIEW

NOTES:
1. ALL PRECAST SECTIONS SHALL BE 4,000 PSI (MIN) CONCRETE DESIGNED FOR AASHTO H-20 LOADING CONFORMING TO ASTM C-478 AND AASHTO M-199.
2. STEEL REINFORCEMENT SHALL BE 0.12-IN^2/LF AND 0.12-IN^2 (BOTH WAYS) BASE BOTTOM CONFORMING TO ASTM A-615 AND ASTM A-185.
3. YARD / AREA DRAIN FRAME AND GRATES SHALL BE AS FOLLOWS:
   - NEENAH FOUNDRY R-2561 FRAME, WITH BEEHIVE GRATE (±1.2 SF OPEN AREA OR EQUAL), FOR DRAINS LOCATED IN GRASSED AREAS;
4. ADJUSTING AND COVERS TO FINISHED GRADE SHALL BE DONE USING PRECAST REINFORCED CONCRETE GRADE RINGS OR CLAY BRICKS.
5. HORIZONTAL SECTION JOINTS SHALL BE TONGUE AND GROOVE JOINTS SEALED WITH ONE (1) STRIP OF FLEXIBLE BUTYL RUBBER JOINT SEALANT CONFORMING TO ASTM C-990.
   - JOINT SEALANT SHALL BE CONSEAL CS-102 (OR EQUAL)
6. PIPE TO MANHOLE CONNECTION JOINTS SHALL BE FLEXIBLE SLEEVE CONFORMING TO ASTM C-923.
   - FLEXIBLE SLEEVES SHALL BE KOR-N-SEAL (OR EQUAL).
7. PIPE HOLE OPENING(S) WITHIN PRECAST SECTIONS VARIES DEPENDING ON PIPE SIZE. PIPE OPENING SIZES SHALL BE COORDINATED WITH PRECASTER AND FLEXIBLE PIPE SLEEVE MANUFACTURERS
8. PRECAST CONCRETE YARD / AREA DRAINS SHALL BE PHOENIX PRECAST PRODUCTS - 3' DIA CATCH BASIN (OR EQUAL).

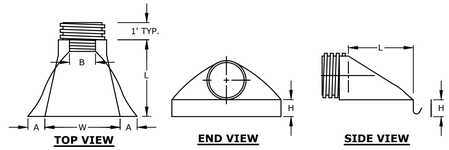
TYPICAL PRECAST CONCRETE YARD DRAIN
NO SCALE



NOTES:
1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE (TYPE II CEMENT).
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER OF THE WALL.
3. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.
4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
5. ALL JOINTS ON THE STRUCTURE AND PIPING SHALL BE WATERTIGHT.

NHDOT ITEM No. 304.4 (CRUSHED STONE - FINE)	
SIEVE SIZE	% PASSING
2"	100
1-1/2"	85-100
3/4"	45-75
#4	10-45
#200	0-5

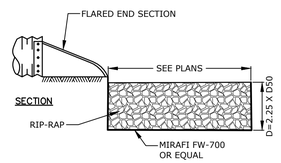
OUTLET CONTROL STRUCTURE 2 (POS 2)
NO SCALE



TOP VIEW **END VIEW** **SIDE VIEW**

PIPE Ø	DIMENSION (INCHES)					
	PART NO.	A(1±)	B MAX	H(1±)	L(1/2±)	W(2±)
12"	1210 NP	6.5	10	6.5	25	29

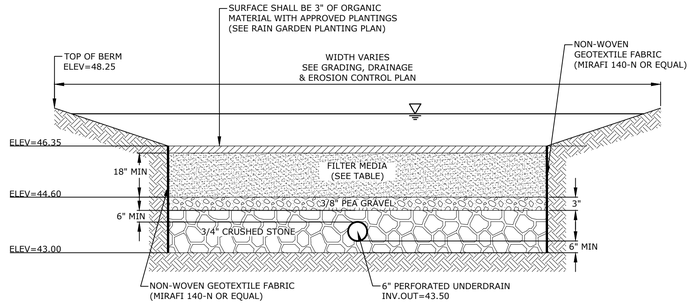
HDPE END SECTION DIMENSIONS
NO SCALE



NOTES:
1. STONE SIZE AND MAT DIMENSIONS DETAILED ON PLANS.
2. STONE SHALL CONSIST OF SUB-ANGULAR FIELD STONE OR ROUGH UNHEWN QUARRY STONE OF APPROXIMATELY RECTANGULAR SHAPE. FLAT OR ROUND ROCKS ARE NOT ACCEPTABLE. THE STONE SHALL BE HARD AND OF SUCH QUALITY THAT IT WILL NOT DISINTEGRATE ON EXPOSURE TO WATER OR WEATHERING, BE CHEMICALLY STABLE AND IT SHALL BE SUITABLE IN ALL OTHER RESPECTS FOR THE PURPOSE INTENDED. THE BULK SPECIFIC GRAVITY (SATURATED SURFACE-DRY BASIS) OF THE INDIVIDUAL STONES SHALL BE AT LEAST 2.5.
3. THE STONE SHALL BE COMPOSED OF A WELL-GRADED MIXTURE DOWN TO THE ONE-INCH SIZE PARTICLE SUCH THAT 50 PERCENT OF THE MIXTURE BY WEIGHT SHALL BE LARGER THAN THE D50 SIZE SPECIFIED. A WELL-GRADED MIXTURE IS DEFINED AS A MIXTURE COMPOSED PRIMARILY OF THE LARGER STONE SIZE BUT WITH A SUFFICIENT MIXTURE OF OTHER SIZES TO FILL THE PROGRESSIVELY SMALLER VOIDS BETWEEN THE STONES. THE DIAMETER OF THE LARGEST STONE SIZE IN SUCH A MIXTURE SHALL BE 1.5 TIMES THE D50 SIZE.

RIP-RAP APPRON DETAIL
NO SCALE

RAIN GARDEN INSPECTION/MAINTENANCE REQUIREMENTS		
INSPECTION / MAINTENANCE	FREQUENCY	ACTION
MONITOR TO ENSURE THAT RAIN GARDENS FUNCTION EFFECTIVELY AFTER STORMS	TWO (2) TIMES ANNUALLY AND AFTER ANY RAINFALL EVENT EXCEEDING 2.5" IN A 24-HR PERIOD	• TRASH AND DEBRIS TO BE REMOVED • ANY REQUIRED MAINTENANCE SHALL BE ADDRESSED
INSPECT VEGETATION	ANNUALLY	• INSPECT THE CONDITION OF ALL RAIN GARDEN VEGETATION • PRUNE BACK OVERGROWTH • REPLACE DEAD VEGETATION • REMOVE ANY INVASIVE SPECIES
INSPECT DRAWDOWN TIME: • THE SYSTEM SHALL DRAWDOWN WITHIN 48-HOURS FOLLOWING A RAINFALL EVENT.	ANNUALLY	• ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE THE FILTRATION FUNCTION, INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER



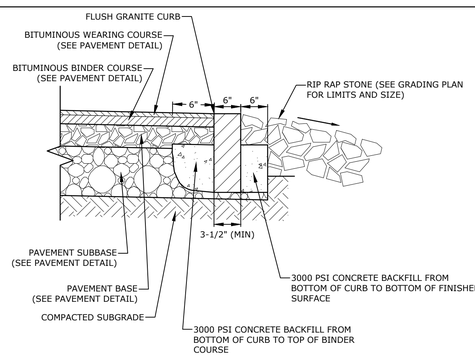
SECTION VIEW

FILTER MEDIA COMPOSITION:			
COMPONENT MATERIAL	PERCENT OF MIXTURE BY VOLUME	GRADATION OF MATERIAL SIEVE #	PERCENT PASSING
ASTM C-33 CONCRETE SAND	50-55	SEE NOTE # 5	
LOAMY SAND TOPSOIL	20-30	200	15-25
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH	20-30	200	5 MAX

NOTES
1. BARK MULCH SHALL BE AGED A MINIMUM OF 12 MONTHS AND SHALL NOT FLOAT.
2. RAIN GARDENS SHALL NOT BE PLACED INTO SERVICE UNTIL THE PRACTICE HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
3. DO NOT TRAFFIC EXPOSED SOIL SURFACES WITH CONSTRUCTION EQUIPMENT. CONTRACTOR SHALL KEEP ALL EXCAVATION EQUIPMENT OUTSIDE OF THE LIMIT OF THE RAIN GARDEN.
4. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR LOCATIONS, LAYOUTS, AND ELEVATIONS.
5. THE SAND PORTION OF THE FILTER MEDIA SHALL MEET THE FOLLOWING GRADATION (ASTM C-33):

SIEVE SIZE	PERCENT PASSING
3/8"	100
#4	95-100
#8	80-100
#16	50-85
#30	25-60
#50	5-30
#100	0-10

RAIN GARDEN SECTION
NO SCALE



NOTES:
1. SEE SITE PLAN FOR LIMITS OF CURB CUT INLET.
2. JOINTS BETWEEN STONES SHALL HAVE A MAXIMUM SPACING OF 1/2" AND SHALL BE MORTARED.

CURB CUT INLET DETAIL
NO SCALE

Tighe&Bond

PROPOSED BANK PAD

BROMLEY-PORTSMOUTH, LLC &
RCQ-PORTSMOUTH, LLC
c/o QUINCY & COMPANY, INC.

1465 WOODBURY AVE
PORTSMOUTH, NH

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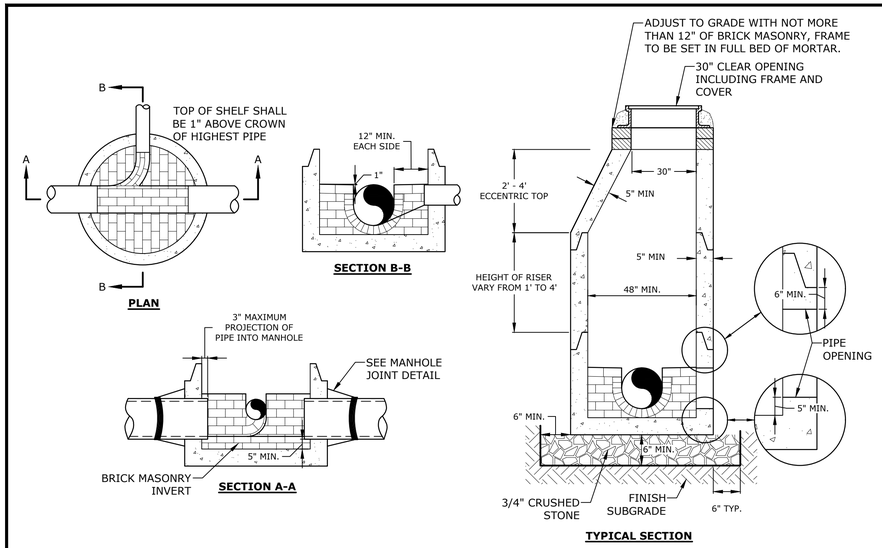
APPROVED BY:	PMC

DETAILS SHEET

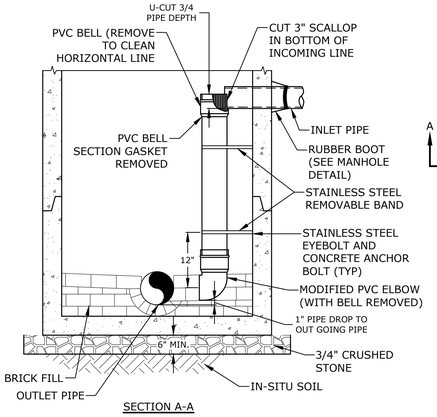
SCALE: AS SHOWN

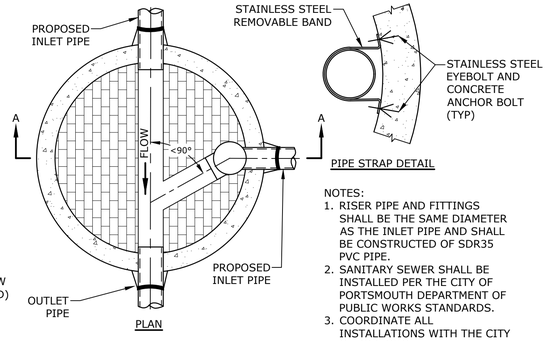
C-504



NOTES:
1. ALL SEWER MANHOLES SHALL BE CONSTRUCTED TO CITY AND STATE STANDARDS.
2. INVERT AND SHELF TO BE PLACED AFTER EACH LEAKAGE TEST.
3. CARE SHALL BE TAKEN TO INSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT.
4. INVERT BRICKS SHALL BE LAID ON EDGE.
5. TWO (2) COATS OF BITUMINOUS WATERPROOF COATING SHALL BE APPLIED TO ENTIRE EXTERIOR OF MANHOLE.
6. FRAMES AND COVERS: MANHOLE FRAMES AND COVERS WITHIN CITY RIGHT OF WAY SHALL BE CITY STANDARD HINGE COVERS MANUFACTURED BY EJ. FRAMES AND COVERS WILL BE PURCHASED FROM THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS. ALL OTHER MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30-INCH CLEAR OPENING. A 3-INCH (MINIMUM HEIGHT) WORD "SEWER" SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER.
7. HORIZONTAL JOINTS SHALL BE SEALED FOR WATER TIGHTNESS USING A DOUBLE ROW OF ELASTOMERIC OR MASTIC-LIKE SEALANT.
8. BARREL AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE DESIGNED FOR H20 LOADING, AND CONFORMING TO ASTM C478-06.

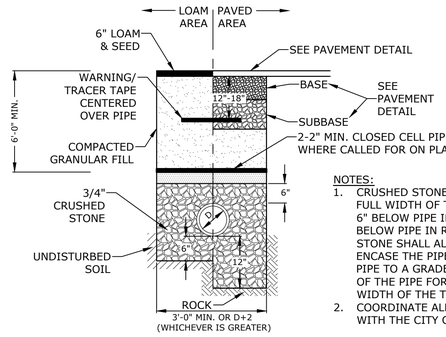
SEWER MANHOLE
NO SCALE





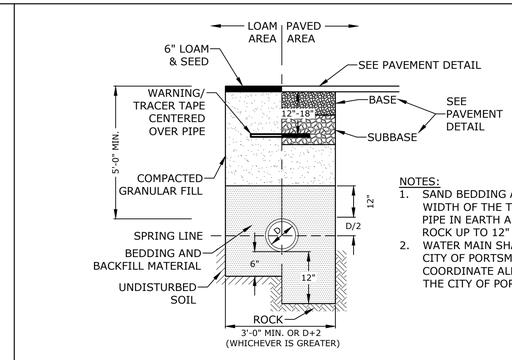
NOTES:
1. RISER PIPE AND FITTINGS SHALL BE THE SAME DIAMETER AS THE INLET PIPE AND SHALL BE CONSTRUCTED OF SDR35 PVC PIPE.
2. SANITARY SEWER SHALL BE INSTALLED PER THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS STANDARDS.
3. COORDINATE ALL INSTALLATIONS WITH THE CITY OF PORTSMOUTH.

INSIDE DROP MANHOLE
NO SCALE



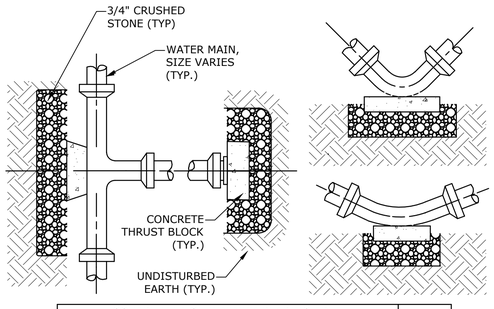
NOTES:
1. CRUSHED STONE BEDDING FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK. CRUSHED STONE SHALL ALSO COMPLETELY ENCASE THE PIPE AND COVER THE PIPE TO A GRADE 6" OVER THE TOP OF THE PIPE FOR THE ENTIRE WIDTH OF THE TRENCH.
2. COORDINATE ALL INSTALLATIONS WITH THE CITY OF PORTSMOUTH.

SEWER SERVICE TRENCH
NO SCALE



NOTES:
1. SAND BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 12" ABOVE TOP OF PIPE.
2. WATER MAIN SHALL BE INSTALLED PER CITY OF PORTSMOUTH STANDARDS. COORDINATE ALL INSTALLATIONS WITH THE CITY OF PORTSMOUTH.

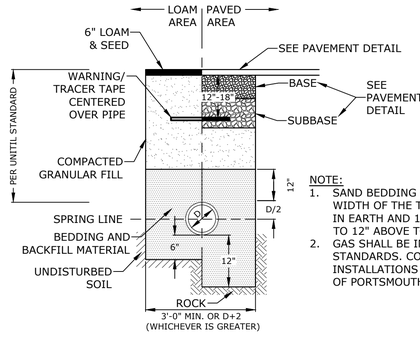
WATER TRENCH
NO SCALE



SQUARE FEET OF MINIMUM BEARING AREA						
NOMINAL DIA. (in)	PIPE SIZE					
	4"	6"	8"	10"	12"	16"
PIPE FITTINGS	*	*	5.18	7.96	11.43	20.29
A 90°	*	4.11	7.33	11.26	16.17	28.69
C 45°	*	*	*	6.10	8.75	15.53
D 22-1/2°	*	*	*	*	4.46	7.92
E 11-1/4°	*	*	*	*	*	*
*SEE NOTE 2	SYSTEM PRESSURE: 125 psi SAFETY FACTOR: 1.5 SOIL BEARING CAPACITY: 2,000 psf					

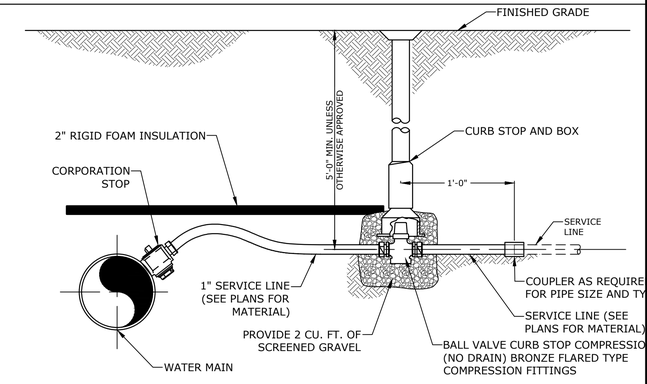
NOTES:
1. ALL THRUST BLOCKS SHALL BE PRE-CAST CONCRETE UNLESS APPROVED BY THE CITY ENGINEER.
2. 2'X2'X2' MINIMUM THRUST BLOCK REQUIRED, ANY BEARING AREA OVER 4 SF REQUIRES THRUST BLOCKS, RESTRAINED JOINTS AND CALCULATIONS ASSOCIATED WITH THE JOINT.
4. FOR MINIMUM BEARING AREAS OVER 4 SF, THE LENGTH (L) OF THE BLOCK IS APPROXIMATELY TWICE AS LONG AS THE HEIGHT (H).
5. THE MINIMUM BEARING AREAS SHOWN IN THE THRUST BLOCK SCHEDULE ARE BASED ON A SYSTEM PRESSURE OF 125 PSI. IF THE SYSTEM PRESSURE IS ABOVE 125 PSI, INCREASE THE NOTED AREAS PROPORTIONALLY TO THE ACTUAL SYSTEM PRESSURE.
6. PLACE CRUSHED STONE BEHIND THRUST BLOCK AGAINST UNDISTURBED SOIL.
7. PLACE THRUST BLOCK ALONG MAXIMUM LENGTH OF THE FITTING TO MAXIMIZE BEARING AREA.
8. CONCRETE COMPRESSIVE STRENGTH: 2,000 PSI MINIMUM.
9. WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLAND MAY BE SUBSTITUTED FOR END BLOCKINGS.
10. INSTALLATION AND STANDARD DIMENSIONAL REQUIREMENTS SHALL BE WITH CITY OF PORTSMOUTH WATER DEPARTMENT STANDARDS.

THRUST BLOCKING DETAIL
NO SCALE



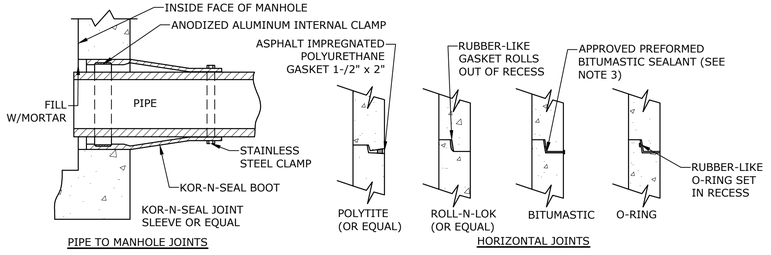
NOTE:
1. SAND BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 12" ABOVE TOP OF PIPE.
2. GAS SHALL BE INSTALLED PER UNITIL STANDARDS. COORDINATE ALL INSTALLATIONS WITH UNITIL AND THE CITY OF PORTSMOUTH.

GAS TRENCH
NO SCALE



NOTE: ALL WATER SERVICE CONNECTIONS SHALL CONFORM TO CITY OF PORTSMOUTH STANDARDS.

WATER SERVICE CONNECTION
NO SCALE



NOTES:
1. HORIZONTAL JOINTS BETWEEN THE SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE PER CITY OF PORTSMOUTH DPW STANDARD AND SHALL BE SEALED FOR WATERTIGHTNESS USING A DOUBLE ROW ELASTOMERIC OR MASTIC-LIKE GASKET.
2. PIPE TO MANHOLE JOINTS SHALL BE PER CITY OF PORTSMOUTH STANDARD.
3. FOR BITUMASTIC TYPE JOINTS THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY.
4. ALL GASKETS, SEALANTS, MORTAR, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' WRITTEN INSTRUCTIONS.

MANHOLE JOINTS
NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE – PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER
7/30/25

STATE OF NEW HAMPSHIRE – NEIL A HANSEN No. 15227 LICENSED PROFESSIONAL ENGINEER
07/30/2025

PROPOSED BANK PAD

BROMLEY-PORTSMOUTH, LLC & RCQ-PORTSMOUTH, LLC
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DETAILS SHEET

SCALE: AS SHOWN

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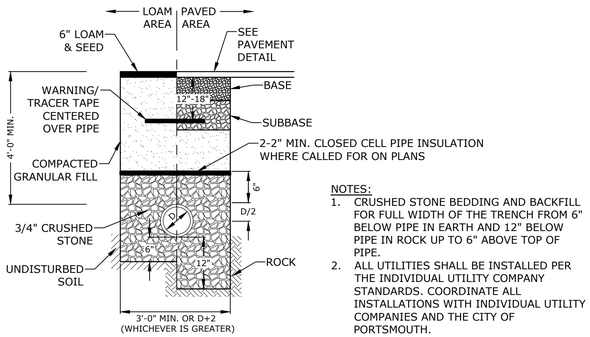
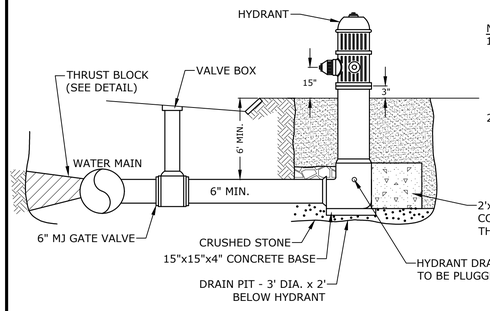


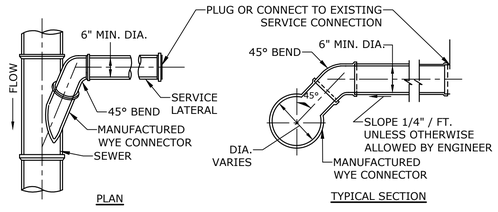
NOTES:
1. CRUSHED STONE BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 6" ABOVE TOP OF PIPE.
2. ALL UTILITIES SHALL BE INSTALLED PER THE INDIVIDUAL UTILITY COMPANY STANDARDS. COORDINATE ALL INSTALLATIONS WITH INDIVIDUAL UTILITY COMPANIES AND THE CITY OF PORTSMOUTH.

STORM DRAIN TRENCH
NO SCALE

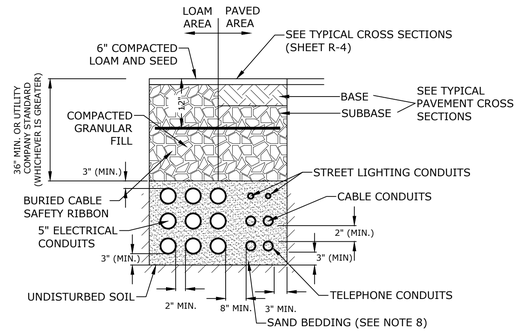


NOTES:
1. HYDRANT TO BE KENNEDY TYPE K-81, RIGHT OPEN (NO EQUAL). COORDINATE WITH CITY OF PORTSMOUTH WATER DEPARTMENT AND CITY OF PORTSMOUTH FIRE DEPARTMENT.
2. PAINT HYDRANT IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS AFTER INSTALLATION AND TESTING.

FIRE HYDRANT
NO SCALE

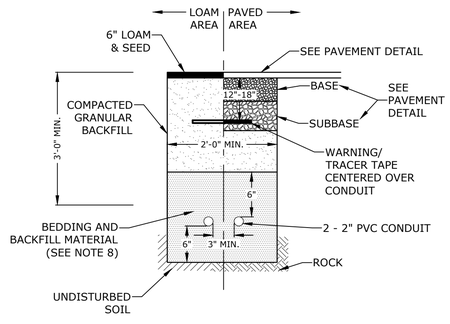


STANDARD SERVICE LATERAL CONNECTION
NO SCALE



NOTES:
1. NUMBER, MATERIAL, AND SIZE OF UTILITY CONDUITS TO BE DETERMINED BY LOCAL UTILITY OR AS SHOWN ON ELECTRICAL DRAWINGS. CONTRACTOR TO PROVIDE ONE SPARE CONDUIT FOR EACH UTILITY TO BUILDING.
2. DIMENSIONS SHOWN REPRESENT OWNERS MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS MAY BE GREATER BASED ON UTILITY COMPANY STANDARDS, BUT SHALL NOT BE LESS THAN THOSE SHOWN.
3. NO CONDUIT RUN SHALL EXCEED 360 DEGREES IN TOTAL BENDS.
4. A SUITABLE PULLING STRING, CAPABLE OF 200 POUNDS OF PULL, MUST BE INSTALLED IN THE CONDUIT BEFORE UTILITY COMPANY IS NOTIFIED TO INSTALL CABLE. THE STRING SHOULD BE BLOWN INTO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID BONDING THE STRING TO THE CONDUIT.
5. UTILITY COMPANY MUST BE GIVEN THE OPPORTUNITY TO INSPECT THE CONDUIT PRIOR TO BACKFILL. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS SHOULD THE UTILITY COMPANY BE UNABLE TO INSTALL ITS CABLE IN A SUITABLE MANNER.
6. ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND, WHERE APPLICABLE, THE NATIONAL ELECTRIC CODE.
7. ALL 90° SWEEPS WILL BE MADE USING RIGID GALVANIZED STEEL. SWEEPS WITH A 36 TO 48 INCH RADIUS.
8. SAND BEDDING TO BE REPLACED WITH CONCRETE ENCASEMENT WHERE COVER IS LESS THAN 3 FEET, WHEN LOCATED BELOW PAVEMENT, OR WHERE SHOWN ON THE UTILITIES PLAN.

ELECTRICAL AND COMMUNICATION CONDUIT
NO SCALE



NOTES:
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8. SAND BEDDING TO BE REPLACED WITH CONCRETE ENCASEMENT WHERE COVER IS LESS THAN 3 FEET, WHEN LOCATED BELOW PAVEMENT, OR WHERE SHOWN ON THE UTILITIES PLAN.
9. SAND BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW CONDUIT UP TO 6" ABOVE TOP OF CONDUIT.

LIGHTING CONDUIT TRENCH
NO SCALE

Tighe&Bond

PATRICK CRIMMINS — STATE OF NEW HAMPSHIRE — No. 12378 — LICENSED PROFESSIONAL ENGINEER
7/30/25

NEIL A HANSEN — STATE OF NEW HAMPSHIRE — No. 15227 — LICENSED PROFESSIONAL ENGINEER
07/30/2025

PROPOSED BANK PAD

BROMLEY-PORTSMOUTH, LLC &
RCQ-PORTSMOUTH, LLC
c/o QUINCY & COMPANY, INC.

1465 WOODBURY AVE
PORTSMOUTH, NH

MARK	DATE	DESCRIPTION
B	7/30/2025	PB Submission
A	6/16/2025	TAC Submission

PROJECT NO:	Q5004-0001
DATE:	6/16/2025
FILE:	Q-5004-0001-C-DTLS.dwg
DRAWN BY:	NHW
DESIGNED/CHECKED BY:	NAH
APPROVED BY:	PMC

DETAILS SHEET

SCALE: AS SHOWN

C-506

Last Saved: 6/16/2025
Printed: Wednesday, July 16, 2025 3:49pm By: NWilcox
Tighe & Bond::J:\Q\Q5004 Quincy & Company, Inc\0001_1465 Woodbury Avenue\Drawings\AutoCAD\Sheet\Q-5004-0001-C-DTLS.dwg

LANDSCAPING KEYNOTES

L01 PROVIDE NEW 1-1/2" - 3" RIVERJACK RIVERSTONE.

L02 PROVIDE NEW PINE BARK MULCH.

LEGEND

PERMEABLE SURFACE

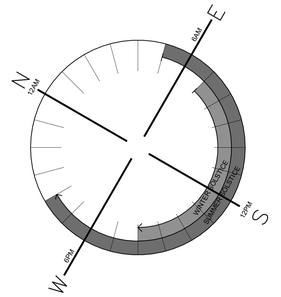
NEW CONCRETE SIDEWALK/CURBING

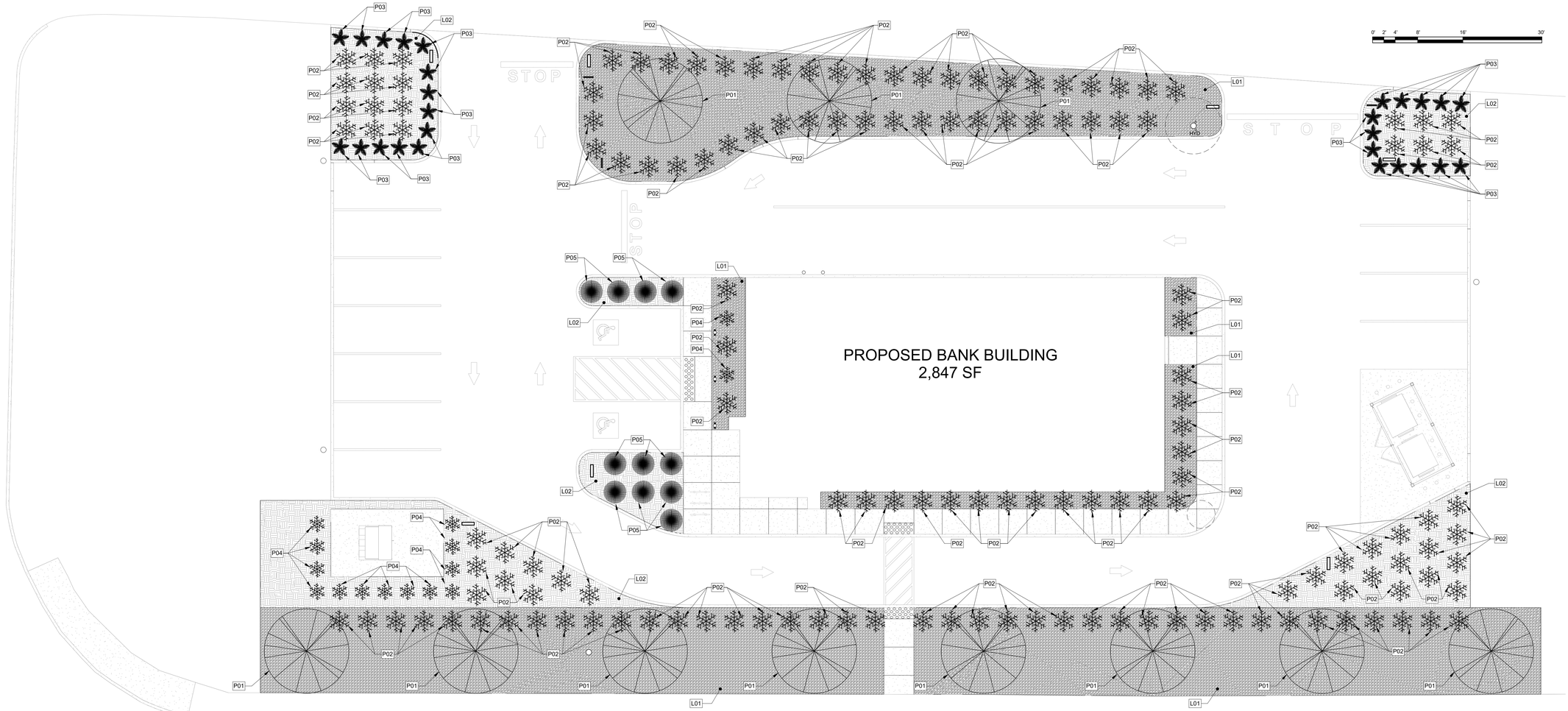
NEW 1 1/2" - 3" RIVERJACK RIVERSTONE

BUILDING FOOTPRINT

PLANTING SCHEDULE

NUMBER	COMMON NAME (BOTANICAL)	MATURE PLANT SIZE	QTY
PLANTINGS			
P01	KOUSA DOGWOOD (CORNUS KOUSA)	HEIGHT: 15'-30' SPREAD: 15'-30'	11
P02	GREEN VELVET BOXWOOD (BUXUS x 'GREEN VELVET')	HEIGHT: 3'-4' SPREAD: 3'-4'	150
P03	HOSTA (HOSTA PLANTAGINEA)	HEIGHT: 1'-3' SPREAD: 1'-3'	27
P04	THREADLEAF TICKSEED (COREOPSIS VERTICILLATA)	HEIGHT: 1'-2' SPREAD: 1'-2'	15
P05	BLACK-EYED SUSAN (RUDBECKIA HIRTA)	HEIGHT: 2'-4' SPREAD: 1'-2'	11





SITE LANDSCAPING PLAN

ARCHITECTURE
INTERIOR ARCHITECTURE
SPACE PLANNING
FACILITIES MANAGEMENT
PROJECT MANAGEMENT

BISBANO + ASSOCIATES, INC.

RISING SUN MILLS | 188 VALLEY STREET | PROVIDENCE, RI | 02909
VOICE 401.404.8310 FAX 401.404.8311 WWW.BISBANO.COM

PORTSMOUTH PLAZA
EXTERIOR SHELL
1465 Woodbury Avenue
Portsmouth, NH
03801

SITE LANDSCAPING PLAN

ISSUE TYPE:
SCHEMATIC DESIGN

ISSUE DATE:
09/24/2025

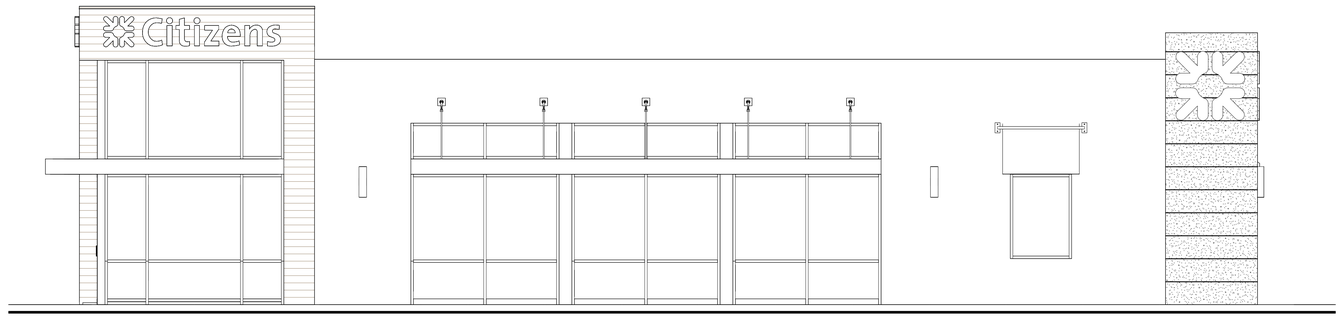
DRAWN BY:
TJ | JC

REVISED:

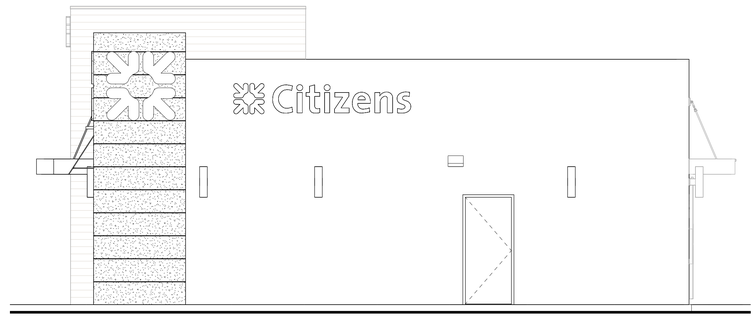
SCALE
1/8" = 1'-0"

B+A PROJECT NO.:
2024.103

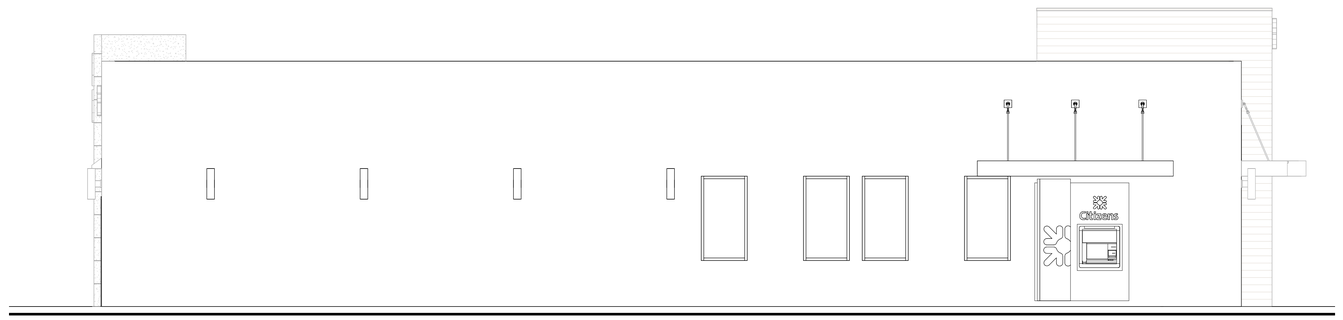
A01.0X



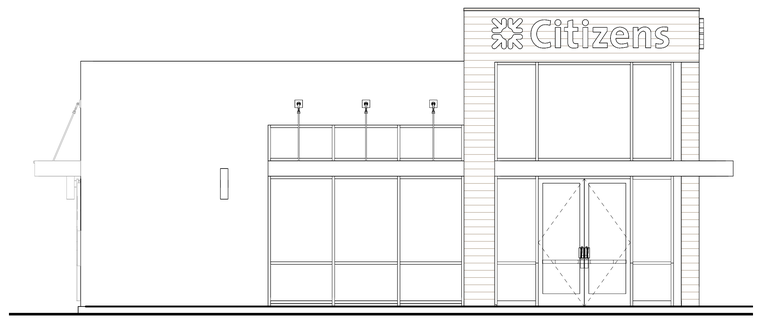
01 SOUTHWEST ELEVATION
1/4" = 1'-0"



02 SOUTHEAST ELEVATION
1/4" = 1'-0"



03 NORTHEAST ELEVATION
1/4" = 1'-0"



04 NORTHWEST ELEVATION
1/4" = 1'-0"

EXTERIOR ELEVATIONS

ARCHITECTURE
INTERIOR ARCHITECTURE
SPACE PLANNING
FACILITIES MANAGEMENT
PROJECT MANAGEMENT

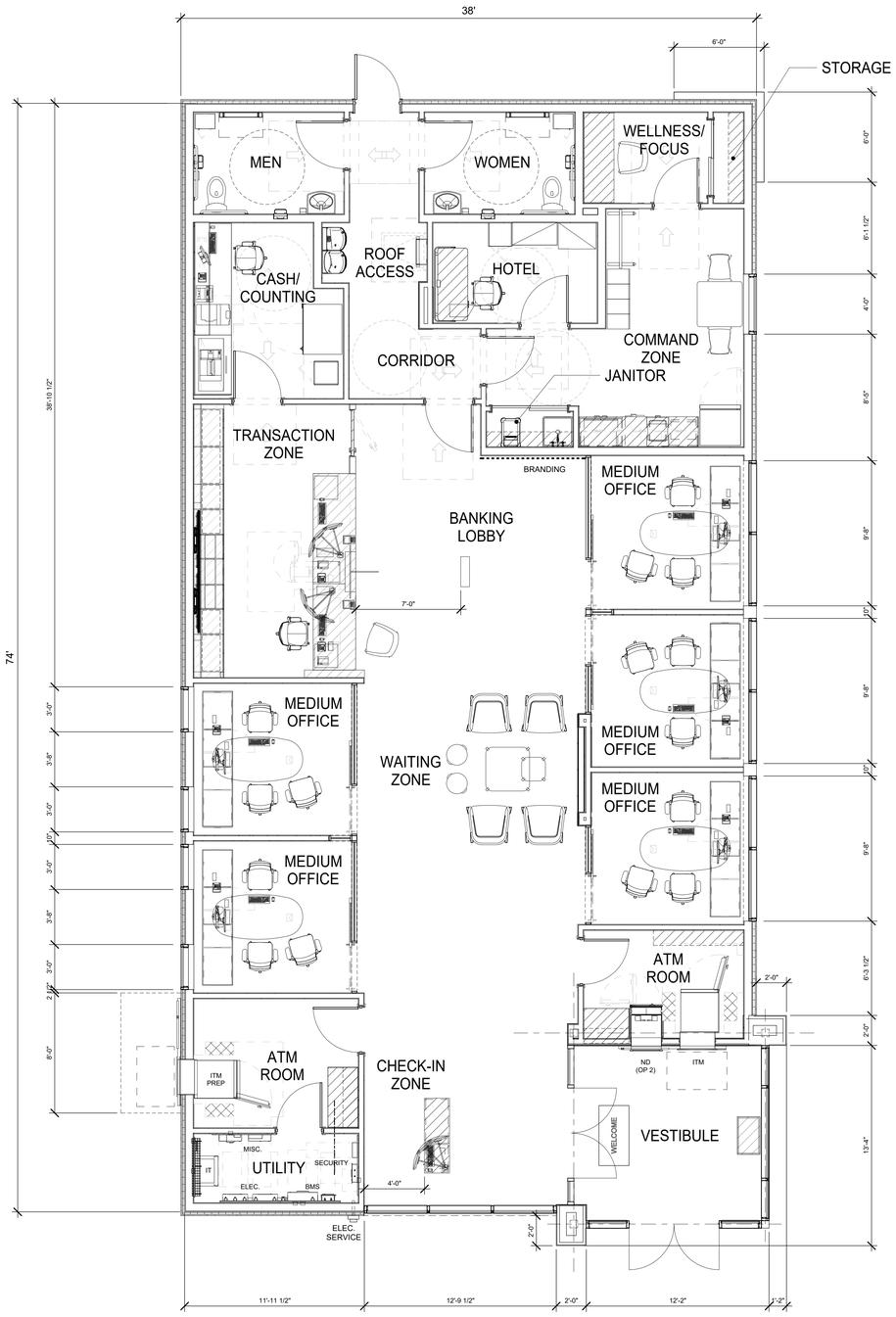
BISBANO + ASSOCIATES, INC.
RISING SUN MILLS | 188 VALLEY STREET | PROVIDENCE, RI | 02909
VOICE 401.404.8310 FAX 401.404.8311 WWW.BISBANO.COM

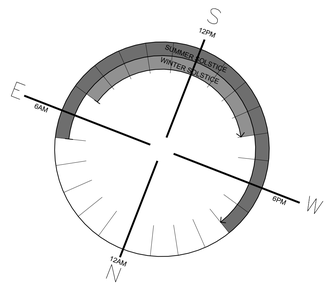
Citizens™
PORTSMOUTH

1465 Woodbury Avenue
Portsmouth, NH 03801

EXTERIOR ELEVATIONS

ISSUE TYPE: TAC MEETING SUBMISSION #1	REVISED:
ISSUE DATE: 06/13/25	
DRAWN BY: RS	
	SCALE: 1/4" = 1'-0"
	B+A PROJECT NO.: 2024.103
	A10.01





0' 1' 2' 4' 8' 16'

PROPOSED PLAN

ARCHITECTURE
INTERIOR ARCHITECTURE
SPACE PLANNING
FACILITIES MANAGEMENT
PROJECT MANAGEMENT

BISBANO + ASSOCIATES, INC.
RISING SUN MILLS | 188 VALLEY STREET | PROVIDENCE, RI | 02909
VOICE 401.404.8310 FAX 401.454.8311 WWW.BISBANO.COM

PORTSMOUTH

1465 Woodbury Avenue
Portsmouth, NH 03801

PROPOSED PLAN

ISSUE TYPE: TEST FIT V01.2	REVISED:
ISSUE DATE: 06/13/25	
DRAWN BY: JC, MS, RS	
	SCALE 1/4" = 1'-0"
	B+A PROJECT NO.: 2024.103
	TF-2

ALL TYPES: 20'0" MOUNTING HEIGHT

Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Manufacturer	Description	Luminaire Lumens	Luminaire Watts	LLF
	3	L4F-S	Single	U.S. ARCHITECTURAL LIGHTING	RZR-PLED-IV-FT-40LED-875mA-40K-HS	11123	110.8	0.920

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Parking Lot	Illuminance	Fc	2.3	4.3	0.6	3.9	7.2

NOTES:
See schedule for luminaire specifications.
Luminaire Symbols are not to scale.
Varying the position, mounting height,
or orientation from what is specified in this
drawing will invalidate the calculation performed.

DRAWN BY: L.C.P.
AGENCY: Apex Lighting Solutions
Date:7/22/2025
SCALE: 1" = 10'0"

Point-By-Point Illuminance Calculation
(At Grade)

Citizens Bank
Portsmouth, NH

Owner Letter of Authorization

This letter is to authorize Tighe & Bond, Inc. (Civil Engineer), to represent and submit on behalf of Bromley-Portsmouth LLC & RCQ-Portsmouth LLC c/o Quincy & Company, Inc. (Owner/Applicant), applications and materials in all site design and permitting matters for the proposed development project located at 1465 Woodbury Avenue in Portsmouth, New Hampshire on parcel of land identified as Map 216 Lot 3. This project includes the construction of a bank pad and associated on-site improvements. This authorization shall relate to those activities that are required for local, state and federal permitting for the above project and include any required signatures for those applications.

Signature	Chris Quincy Print Name	6/4/2025 Date

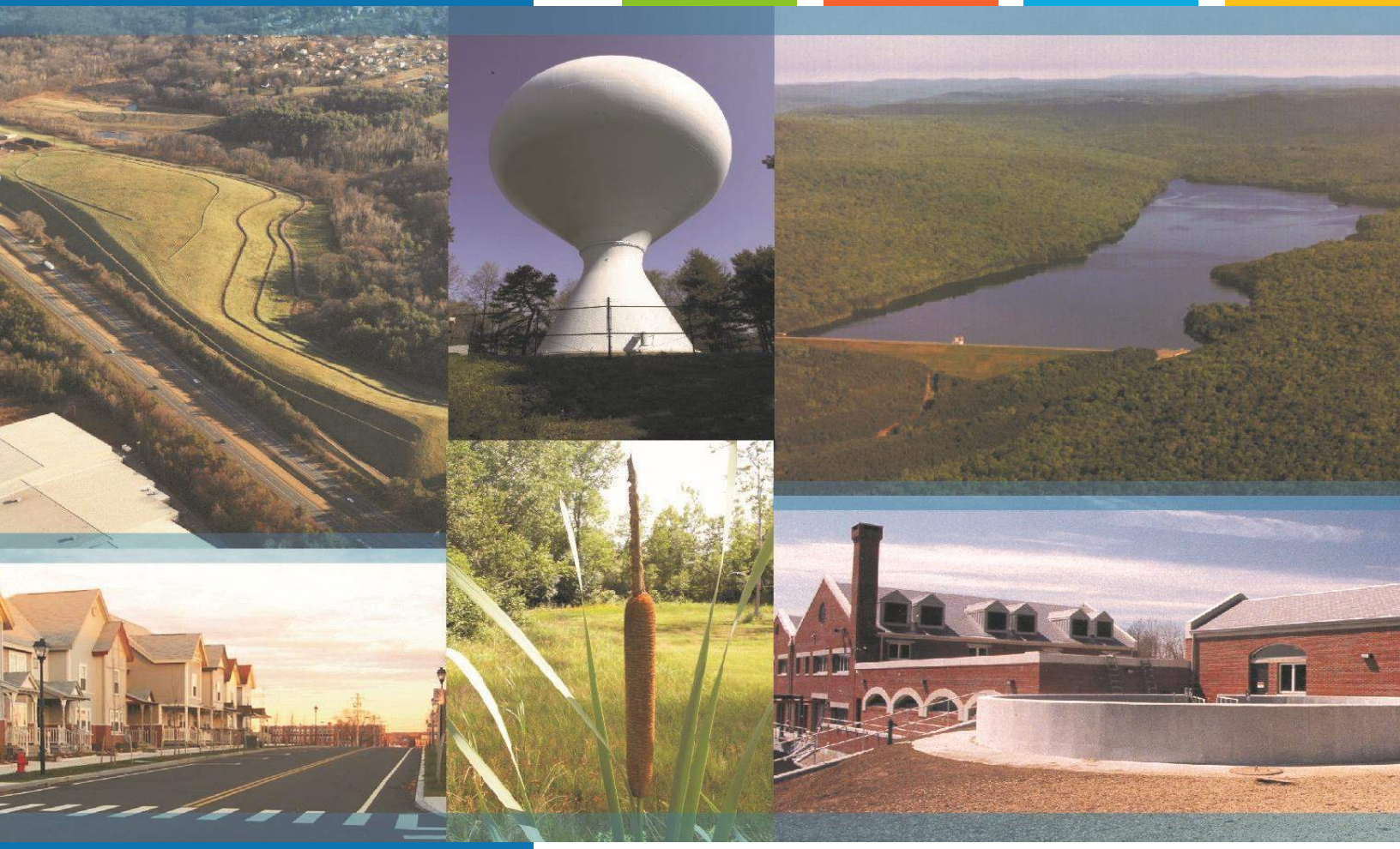
1465 Woodbury Ave - Site Plan Review - TAC STIPULATIONS OF APPROVAL (7/8/25)

1465 Woodbury Avenue
Portsmouth, New Hampshire
July 30, 2025

Prepared by: NAH/NHW
Project # Q5004-001

	CHANGES TO BE MADE PRIOR TO PLANNING BOARD SUBMISSION	Response	Corresponding Plan Sheet #
1	The hydrant valve should be placed next to the hydrant, not at the split.	The hydrant valve has been moved and is now represented next to the hydrant.	C-104
2	The hydrant connection needs to face the entrance.	The hydrant connection has been rotated to face the entrance.	C-104
3	Existing and proposed hydrants much be shown on the landscaping plans.	Existing and proposed hydrants are now shown on the landscaping plans.	A01.0X

	Internal Use Only		

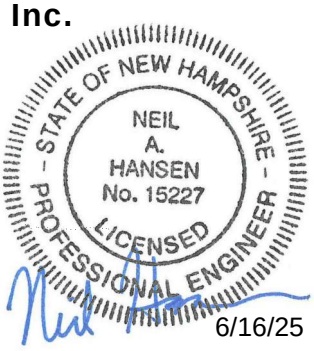


Proposed Bank Pad
1465 Woodbury Avenue
Portsmouth, NH

Drainage Analysis

Bromley-Portsmouth, LLC
RCQ-Portsmouth, LLC
c/o Quincy & Company, Inc.

June 16, 2025



Tighe&Bond

100% Recyclable

Table of Contents

Section 1
Project Description

The proposed project is located at 1465 Woodbury Ave, which is identified as Map 216 Lot 3 on the City of Portsmouth Tax Maps. The site currently functions as a significant retail hub and features a variety of co-tenants including major retailers such as Market Basket, Marshalls, Burlington, Panera Bread, and Wendy's, among others. The property is a 19.76-acre parcel of land that is located in the Gateway District (G1). The property is bound to the southwest & southeast by Woodbury Ave, to the north-west by Commerce Way, & to the northeast by a wooded area, with an office park beyond.

1.1 On-Site Soil Description

The project site consists of terrain that is generally sloping from the south to the north at grades below 10%. The site has an approximate high point of elevation 53 located along the property line, abutting Woodbury Ave.

A web soil survey was completed for the project and can be found in Appendix A of this report. Based on the soil survey, all soil on site is classified as "Urban Land". The runoff analyzed within this study has been modeled using Hydrologic Soil Group D soils.

1.2 Pre- and Post-Development Comparison

The pre-development and post-development watershed areas have been analyzed at one (1) distinct point of analysis (PA-1.) While the point of analysis has remained unchanged, the contributing sub-catchment areas varied between pre-development and post-development conditions. These adjustments were made to reflect the differences in drainage patterns between the existing and proposed conditions. The overall area analyzed as part of this drainage analysis was held constant. PA-1 is located at the point at which the stormwater from the sites watershed enters the existing closed drainage system located within the lot.

The peak discharge rates at this point of analysis were determined by analyzing Type III, 24-hour storm events. The rainfall data for these storm events were obtained from the data published by the Northeast Regional Climate Center at Cornell University, which can be found in Appendix B.

Furthermore, the site is located within a Coastal and Great Bay Community, therefore an added factor of safety of 15% was included as required by Env-Wq 1503.08(l).

1.3 Calculation Methods

The design storms analyzed in this study are the 2-year, 10-year, 25-year and 50-year 24-hour duration storm events. The stormwater modeling system, HydroCAD 10.0 was utilized to predict the peak runoff rates from these storm events. The peak discharge rates were determined by analyzing Type III 24-hour storm events. The rainfall data for these storm events were obtained from the data published by the Northeast Regional Climate Center at Cornell University, with an additional 15% added factor of safety as required by Env-Wq 1503.08(l).

The time of concentration was computed using the TR-55 Method, which provides a means of determining the time for an entire watershed to contribute runoff to a specific location via sheet flows, shallow concentrated flow, and channel flow. Runoff curve numbers were calculated by estimating the coverage areas and then summing the curve number for the coverage area as a percent of the entire watershed.

References:

1. HydroCAD Stormwater Modeling System, by HydroCAD Software Solutions LLC, Chocorua, New Hampshire.
2. New Hampshire Stormwater Management Manual, Volume 2, Post-Construction Best Management Practices Selection and Design, December 2008.
3. "Extreme Precipitation in New York & New England." Extreme Precipitation in New York & New England by Northeast Regional Climate Center (NRCC), 26 June 2012.

Section 2
Pre-Development Conditions

To analyze the pre-development condition, the site has been modeled utilizing (1) distinct point of analysis (PA-1). This point of analysis and watershed are depicted on the plan entitled "Pre-Development Watershed Plan", Sheet C-801.

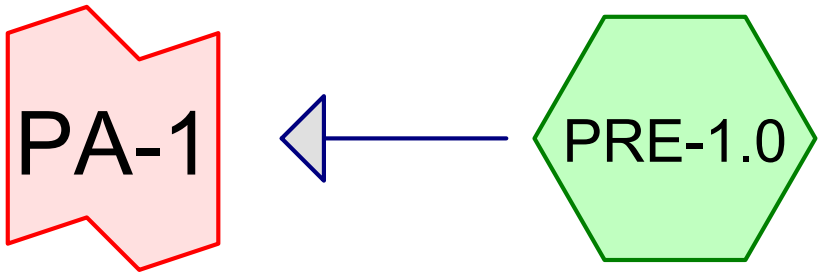
The point of analysis and its contributing watershed area is described below:

Point of Analysis (PA-1)

Point of analysis 1 is comprised of one subcatchment area (PRE 1.0). This area currently exists as a fully grassed area. Runoff from this watershed sheet flows untreated stormwater into a grading depression, which discharges stormwater from the watershed into a closed drainage system on site, through a 12" culvert.

2.1 Pre-Development Calculations

2.2 Pre-Development Watershed Plan



Subcat Reach Pond Link

Routing Diagram for Q-5004-001_PRE
Prepared by Tighe & Bond, Printed 5/28/2025

Area Listing (selected nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
37,535	80	>75% Grass cover, Good, HSG D (PRE-1.0)
37,535	**80**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
0	HSG C	
37,535	HSG D	PRE-1.0
0	Other	
37,535		**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE-1.0: Runoff Area=37,535 sf 0.00% Impervious Runoff Depth>1.78"
Flow Length=358' Tc=5.2 min CN=80 Runoff=1.79 cfs 5,564 cf

Link PA-1: Inflow=1.79 cfs 5,564 cf
Primary=1.79 cfs 5,564 cf

Total Runoff Area = 37,535 sf Runoff Volume = 5,564 cf Average Runoff Depth = 1.78"
100.00% Pervious = 37,535 sf 0.00% Impervious = 0 sf

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE-1.0: Runoff Area=37,535 sf 0.00% Impervious Runoff Depth>3.40"
Flow Length=358' Tc=5.2 min CN=80 Runoff=3.42 cfs 10,642 cf

Link PA-1: Inflow=3.42 cfs 10,642 cf
Primary=3.42 cfs 10,642 cf

Total Runoff Area = 37,535 sf Runoff Volume = 10,642 cf Average Runoff Depth = 3.40"
100.00% Pervious = 37,535 sf 0.00% Impervious = 0 sf

Summary for Subcatchment PRE-1.0:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 3.42 cfs @ 12.08 hrs, Volume= 10,642 cf, Depth> 3.40"
Routed to Link PA-1 :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=5.58"

Area (sf)	CN	Description
37,535	80	>75% Grass cover, Good, HSG D
37,535		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	50	0.0700	0.26		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.68"
2.0	308	0.0260	2.60		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
5.2	358	Total			

Summary for Link PA-1:

Inflow Area = 37,535 sf, 0.00% Impervious, Inflow Depth > 3.40" for 10-Yr event
Inflow = 3.42 cfs @ 12.08 hrs, Volume= 10,642 cf
Primary = 3.42 cfs @ 12.08 hrs, Volume= 10,642 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE-1.0: Runoff Area=37,535 sf 0.00% Impervious Runoff Depth>4.76"
Flow Length=358' Tc=5.2 min CN=80 Runoff=4.73 cfs 14,876 cf

Link PA-1: Inflow=4.73 cfs 14,876 cf
Primary=4.73 cfs 14,876 cf

Total Runoff Area = 37,535 sf Runoff Volume = 14,876 cf Average Runoff Depth = 4.76"
100.00% Pervious = 37,535 sf 0.00% Impervious = 0 sf

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPRE-1.0: Runoff Area=37,535 sf 0.00% Impervious Runoff Depth>6.05"
Flow Length=358' Tc=5.2 min CN=80 Runoff=5.97 cfs 18,936 cf

Link PA-1: Inflow=5.97 cfs 18,936 cf
Primary=5.97 cfs 18,936 cf

Total Runoff Area = 37,535 sf Runoff Volume = 18,936 cf Average Runoff Depth = 6.05"
100.00% Pervious = 37,535 sf 0.00% Impervious = 0 sf

PRE-DEVELOPMENT WATERSHED LEGEND

- PRE-DEVELOPMENT WATERSHED BOUNDARY
- LONGEST FLOW PATH
- PRE 1.0 — PRE DEVELOPMENT WATERSHED AREA DESIGNATION
- PA-1 — POINT OF ANALYSIS

MAP 216 LOT 3
19.76 Ac.±

APPROXIMATE LOCATION OF 50' WIDE SEWER EASEMENT

APPROXIMATE LOCATION OF 20' WIDE SEWER EASEMENT

PA-1

PRE 1.0

RIM=47.47
INV.(A)=44.07
INV.(B)=44.07
INV.(C)=43.50
INV.(D)=43.33

RIM=47.88
INV.(A)=43.83
INV.(B)=43.33

RIM=48.14
INV.(A)=44.29

RIM=48.10
INV.(A)=44.80
INV.(B)=44.80

RIM=48.38
INV.(A)=35.28
INV.(B)=35.08

RIM=48.99
INV.(A)=45.6

12"RCP INV.=43.50

12"CMP INV.=43.78

RIM=49.24
INV.(A)=43.49
INV.(B)=43.49
INV.(C)=43.49

RIM=51.25
INV.(A)=47.05
INV.(B)=44.70
INV.(C)=46.02
INV.(D)=44.35

RIM=53.74
INV.(A)=49.29
INV.(B)=48.54

WOODBURY AVENUE
(PUBLIC – VARIABLE WIDTH)

BITUMINOUS CONCRETE

BITUMINOUS CONCRETE SIDEWALK

GRASS

TRAFFIC SIGNAL

PEDESTRIAN SIGNAL

REFLECTOR

GUY POLE

OVERHEAD WIRES (TYP.)

RECORD LOCATION

APPROXIMATE LOCATION OF SEWER MAIN PER RECORD PLANS

APPROXIMATE LOCATION OF WATER MAIN PER RECORD PLANS

APPROXIMATE LOCATION OF GAS MAIN PER RECORD PLANS

6"CI

6"PLASTIC

Tighe&Bond

THIS DOCUMENT IS RELEASED FOR PERMITTING REVIEW ONLY. IT IS NOT INTENDED FOR BIDDING OR CONSTRUCTION PURPOSES.

0 20' 40'
GRAPHIC SCALE

PROPOSED BANK PAD

BROMLEY-PORTSMOUTH, LLC &
RCQ-PORTSMOUTH, LLC
c/o QUINCY & COMPANY, INC.

1465 WOODBURY AVE
PORTSMOUTH, NH

MARK	DATE	DESCRIPTION

PROJECT NO:	Q5004-0001
DATE:	5/6/2025
FILE:	Q-5004-0001_C-DSGN.dwg
DRAWN BY:	NHW
DESIGNED/CHECKED BY:	NAH
APPROVED BY:	PMC

PRE-DEVELOPMENT WATERSHED PLAN

SCALE: AS SHOWN

C-801

Last Saved: 5/27/2025
Printed: May 28, 2025-1:19pm By: NWilcox
Tighe & Bond:J:\Q\Q5004 Quincy & Company, Inc\0001_1465 Woodbury Avenue\Drawings\AutoCAD\Sheet\Q-5004-0001_C-DSGN.dwg

PRE-DEVELOPMENT WATERSHED LEGEND

- PRE-DEVELOPMENT WATERSHED BOUNDARY
- LONGEST FLOW PATH
- PRE 1.0 — PRE DEVELOPMENT WATERSHED AREA DESIGNATION
- PA-1 — POINT OF ANALYSIS

MAP 216 LOT 3
19.76 Ac.±

WOODBURY AVENUE
(PUBLIC – VARIABLE WIDTH)

PA-1

PRE 1.0

APPROXIMATE LOCATION OF 50' WIDE SEWER EASEMENT

APPROXIMATE LOCATION OF 20' WIDE SEWER EASEMENT

RIM=47.47 RIM=47.88
INV.(A)=44.07 (A)=43.83
INV.(B)=44.07 (B)=43.33
INV.(C)=43.50
INV.(D)=43.33

RIM=48.14
INV.(A)=44.29
INV.(RIM=48.10
INV.(A)=44.80
INV.(B)=44.80

RIM=48.38
INV.(A)=35.28
INV.(B)=35.08

RIM=48.99
INV.(A)=45.6

RIM=49.24
INV.(A)=43.49
INV.(B)=43.49
INV.(C)=43.49

RIM=51.25
INV.(A)=47.05
INV.(B)=44.70
INV.(C)=46.02
INV.(D)=44.35

RIM=53.74
INV.(A)=49.29
INV.(B)=48.54

12"RCP INV.=43.50
12"CMP INV.=43.78
GUY POLE #177-66S
OVERHEAD WIRES (TYP.)
TRAFFIC SIGNAL
PEDESTRIAN SIGNAL
REFLECTOR
BITUMINOUS CONCRETE
BITUMINOUS CONCRETE SIDEWALK
GRASS
STOP
EOP
VGC
SSLW

RECORD LOCATION
APPROXIMATE LOCATION OF SEWER MAIN PER RECORD PLANS
APPROXIMATE LOCATION OF WATER MAIN PER RECORD PLANS
APPROXIMATE LOCATION OF GAS MAIN PER RECORD PLANS
6"CI
6"PLASTIC

Tighe&Bond

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PRE-DEVELOPMENT WATERSHED PLAN

SCALE: AS SHOWN

C-801

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Section 3
Post-Development Conditions

The post-development condition was analyzed by dividing the pre-development watersheds into two (2) post development watershed areas. Stormwater runoff from these sub-catchment areas flow via subsurface drainage systems prior to discharging to a proposed rain garden, and ultimately entering the existing closed drainage system on site. Like the pre-development condition, flows from these sub-catchment areas are modeled at the same point of analysis (PA-1).

A detention basin is also included within the development site for the purpose of mitigating peak flowrates and providing additional storage upstream of the proposed rain garden. The rain garden has been sized to treat the water quality volume for the proposed development area.

The point of analysis and its sub-catchment areas are depicted on the plan entitled "Post-Development Watershed Plan," Sheet C-802. The point of analysis and it's contributing watershed areas are described below:

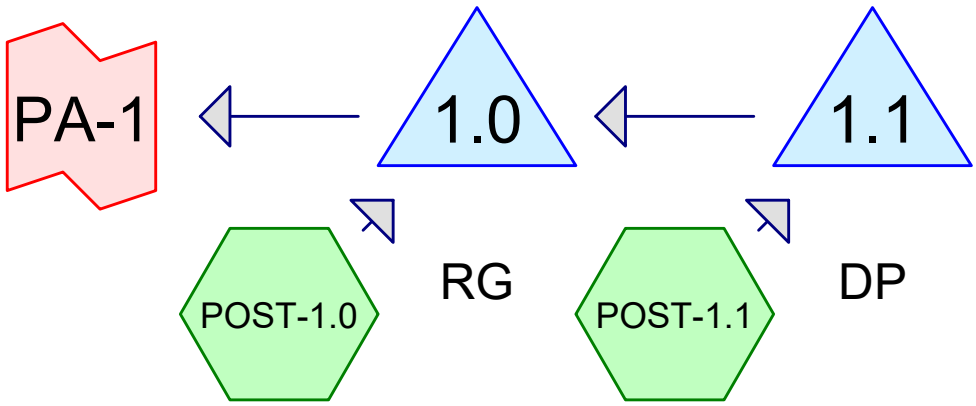
Point of Analysis (PA-1)

Post-development Watershed 1.0 (POST 1.0) consists of the north half of the proposed redevelopment area and contains a portion of the paved parking area, concrete sidewalk, & landscaped areas. This watershed also contains the roof runoff of the proposed building. Runoff from this watershed is travels via sheet flow to a sediment forebay prior to discharging into the proposed rain garden. The rain garden discharges to the existing closed drainage system.

Post-development Watershed 1.1 (POST 1.1) is comprised of the remainder of the proposed parking area and a fully grassed area to the south of the proposed redevelopment, including the proposed detention basin. Runoff in this watershed area sheet flows directly into the proposed detention basin, before entering a proposed yard drain which ultimately flows into the rain garden via the proposed closed drainage system.

3.1 Post-Development Calculations

3.2 Post-Development Watershed Plan



Subcat Reach Pond Link

Routing Diagram for Q-5004-001_POST
Prepared by Tighe & Bond, Printed 6/16/2025

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
25,418	80	>75% Grass cover, Good, HSG D (POST-1.0, POST-1.1)
3,970	98	Paved parking, HSG D (POST-1.0)
5,297	98	Paved parking/Concrete, HSG D (POST-1.1)
2,850	98	Roofs, HSG D (POST-1.0)
37,535	**86**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
0	HSG C	
37,535	HSG D	POST-1.0, POST-1.1
0	Other	
37,535		**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPOST-1.0: Runoff Area=19,481 sf 35.01% Impervious Runoff Depth>2.26"
Flow Length=147' Tc=5.0 min CN=86 Runoff=1.18 cfs 3,664 cf

SubcatchmentPOST-1.1: Runoff Area=18,054 sf 29.34% Impervious Runoff Depth>2.17"
Flow Length=108' Slope=0.0310 '/' Tc=5.0 min CN=85 Runoff=1.06 cfs 3,269 cf

Pond 1.0: RG Peak Elev=46.84' Storage=1,680 cf Inflow=1.50 cfs 6,892 cf
Outflow=0.41 cfs 6,833 cf

Pond 1.1: DP Peak Elev=47.53' Storage=761 cf Inflow=1.06 cfs 3,269 cf
Outflow=0.39 cfs 3,228 cf

Link PA-1: Inflow=0.41 cfs 6,833 cf
Primary=0.41 cfs 6,833 cf

Total Runoff Area = 37,535 sf Runoff Volume = 6,932 cf Average Runoff Depth = 2.22"
67.72% Pervious = 25,418 sf 32.28% Impervious = 12,117 sf

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPOST-1.0: Runoff Area=19,481 sf 35.01% Impervious Runoff Depth>4.01"
Flow Length=147' Tc=5.0 min CN=86 Runoff=2.07 cfs 6,509 cf

SubcatchmentPOST-1.1: Runoff Area=18,054 sf 29.34% Impervious Runoff Depth>3.91"
Flow Length=108' Slope=0.0310 '/' Tc=5.0 min CN=85 Runoff=1.88 cfs 5,876 cf

Pond 1.0: RG Peak Elev=47.34' Storage=2,638 cf Inflow=2.50 cfs 12,333 cf
Outflow=0.86 cfs 12,259 cf

Pond 1.1: DP Peak Elev=48.36' Storage=1,682 cf Inflow=1.88 cfs 5,876 cf
Outflow=0.47 cfs 5,824 cf

Link PA-1: Inflow=0.86 cfs 12,259 cf
Primary=0.86 cfs 12,259 cf

Total Runoff Area = 37,535 sf Runoff Volume = 12,384 cf Average Runoff Depth = 3.96"
67.72% Pervious = 25,418 sf 32.28% Impervious = 12,117 sf

Summary for Subcatchment POST-1.0:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 2.07 cfs @ 12.07 hrs, Volume= 6,509 cf, Depth> 4.01"
Routed to Pond 1.0 : RG

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=5.58"

Area (sf)	CN	Description
12,661	80	>75% Grass cover, Good, HSG D
2,850	98	Roofs, HSG D
3,970	98	Paved parking, HSG D
19,481	86	Weighted Average
12,661		64.99% Pervious Area
6,820		35.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0180	1.41		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.68"
0.3	47	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.5	147	Total, Increased to minimum Tc = 5.0 min			

Summary for Subcatchment POST-1.1:

[49] Hint: Tc<2dt may require smaller dt

Runoff = 1.88 cfs @ 12.07 hrs, Volume= 5,876 cf, Depth> 3.91"
Routed to Pond 1.1 : DP

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr Rainfall=5.58"

	Area (sf)	CN	Description
	12,757	80	>75% Grass cover, Good, HSG D
*	5,297	98	Paved parking/Concrete, HSG D
	18,054	85	Weighted Average
	12,757		70.66% Pervious Area
	5,297		29.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	50	0.0310	0.19		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.68"
0.4	58	0.0310	2.64		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
4.8	108	Total, Increased to minimum Tc = 5.0 min			

Summary for Pond 1.0: RG

Inflow Area = 37,535 sf, 32.28% Impervious, Inflow Depth > 3.94" for 10-Yr event
Inflow = 2.50 cfs @ 12.08 hrs, Volume= 12,333 cf
Outflow = 0.86 cfs @ 12.50 hrs, Volume= 12,259 cf, Atten= 66%, Lag= 25.2 min
Primary = 0.86 cfs @ 12.50 hrs, Volume= 12,259 cf
Routed to Link PA-1 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 47.34' @ 12.50 hrs Surf.Area= 2,128 sf Storage= 2,638 cf
Flood Elev= 48.25' Surf.Area= 2,634 sf Storage= 4,218 cf

Plug-Flow detention time= 46.8 min calculated for 12,233 cf (99% of inflow)
Center-of-Mass det. time= 43.1 min (860.9 - 817.8)

Volume	Invert	Avail.Storage	Storage Description
#1	43.50'	4,218 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
43.50	1,443	0.0	0	0
44.60	1,443	40.0	635	635
46.35	1,443	10.0	253	887
47.00	1,872	100.0	1,077	1,965
48.00	2,634	100.0	2,253	4,218

Device	Routing	Invert	Outlet Devices
#1	Primary	43.50'	**12.0" Round Culvert** L= 49.0' Ke= 0.500 Inlet / Outlet Invert= 43.50' / 43.33' S= 0.0035 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	43.50'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 2	43.50'	**10.000 in/hr Exfiltration over Surface area**
#4	Device 1	47.00'	**8.0" W x 3.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Device 1	47.75'	**13.9" x 13.9" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.86 cfs @ 12.50 hrs HW=47.34' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.86 cfs of 6.27 cfs potential flow)
  - **2=Orifice/Grate** (Passes 0.49 cfs of 1.79 cfs potential flow)
    - **3=Exfiltration** (Exfiltration Controls 0.49 cfs)
  - **4=Orifice/Grate** (Orifice Controls 0.36 cfs @ 2.18 fps)
  - **5=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond 1.1: DP

Inflow Area = 18,054 sf, 29.34% Impervious, Inflow Depth > 3.91" for 10-Yr event
Inflow = 1.88 cfs @ 12.07 hrs, Volume= 5,876 cf
Outflow = 0.47 cfs @ 12.12 hrs, Volume= 5,824 cf, Atten= 75%, Lag= 3.1 min
Primary = 0.47 cfs @ 12.12 hrs, Volume= 5,824 cf
Routed to Pond 1.0 : RG

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 48.36' @ 12.48 hrs Surf.Area= 1,291 sf Storage= 1,682 cf
Flood Elev= 49.35' Surf.Area= 1,581 sf Storage= 2,604 cf

Plug-Flow detention time= 42.1 min calculated for 5,824 cf (99% of inflow)
Center-of-Mass det. time= 36.7 min (838.7 - 802.0)

Volume	Invert	Avail.Storage	Storage Description
#1	46.50'	2,604 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
46.50	553	0	0
47.00	727	320	320
48.00	1,130	929	1,249
49.00	1,581	1,356	2,604

Device	Routing	Invert	Outlet Devices
#1	Primary	46.50'	**12.0" Round Culvert** L= 130.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 46.50' / 45.85' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	46.50'	**4.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	48.75'	**16.0" x 16.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.43 cfs @ 12.12 hrs HW=47.96' TW=46.93' (Dynamic Tailwater)
↑**1=Culvert** (Passes 0.43 cfs of 2.71 cfs potential flow)
↑**2=Orifice/Grate** (Orifice Controls 0.43 cfs @ 4.89 fps)
3=Orifice/Grate (Controls 0.00 cfs)

Summary for Link PA-1:

Inflow Area = 37,535 sf, 32.28% Impervious, Inflow Depth > 3.92" for 10-Yr event
Inflow = 0.86 cfs @ 12.50 hrs, Volume= 12,259 cf
Primary = 0.86 cfs @ 12.50 hrs, Volume= 12,259 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPOST-1.0: Runoff Area=19,481 sf 35.01% Impervious Runoff Depth>5.43"
Flow Length=147' Tc=5.0 min CN=86 Runoff=2.77 cfs 8,815 cf

SubcatchmentPOST-1.1: Runoff Area=18,054 sf 29.34% Impervious Runoff Depth>5.32"
Flow Length=108' Slope=0.0310 '/' Tc=5.0 min CN=85 Runoff=2.53 cfs 7,999 cf

Pond 1.0: RG Peak Elev=47.73' Storage=3,532 cf Inflow=3.25 cfs 16,755 cf
Outflow=1.18 cfs 16,671 cf

Pond 1.1: DP Peak Elev=48.83' Storage=2,336 cf Inflow=2.53 cfs 7,999 cf
Outflow=0.82 cfs 7,940 cf

Link PA-1: Inflow=1.18 cfs 16,671 cf
Primary=1.18 cfs 16,671 cf

Total Runoff Area = 37,535 sf Runoff Volume = 16,814 cf Average Runoff Depth = 5.38"
67.72% Pervious = 25,418 sf 32.28% Impervious = 12,117 sf

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPOST-1.0: Runoff Area=19,481 sf 35.01% Impervious Runoff Depth>6.77"
Flow Length=147' Tc=5.0 min CN=86 Runoff=3.42 cfs 10,997 cf

SubcatchmentPOST-1.1: Runoff Area=18,054 sf 29.34% Impervious Runoff Depth>6.65"
Flow Length=108' Slope=0.0310 '/' Tc=5.0 min CN=85 Runoff=3.13 cfs 10,011 cf

Pond 1.0: RG Peak Elev=47.95' Storage=4,099 cf Inflow=3.90 cfs 20,943 cf
Outflow=2.74 cfs 20,852 cf

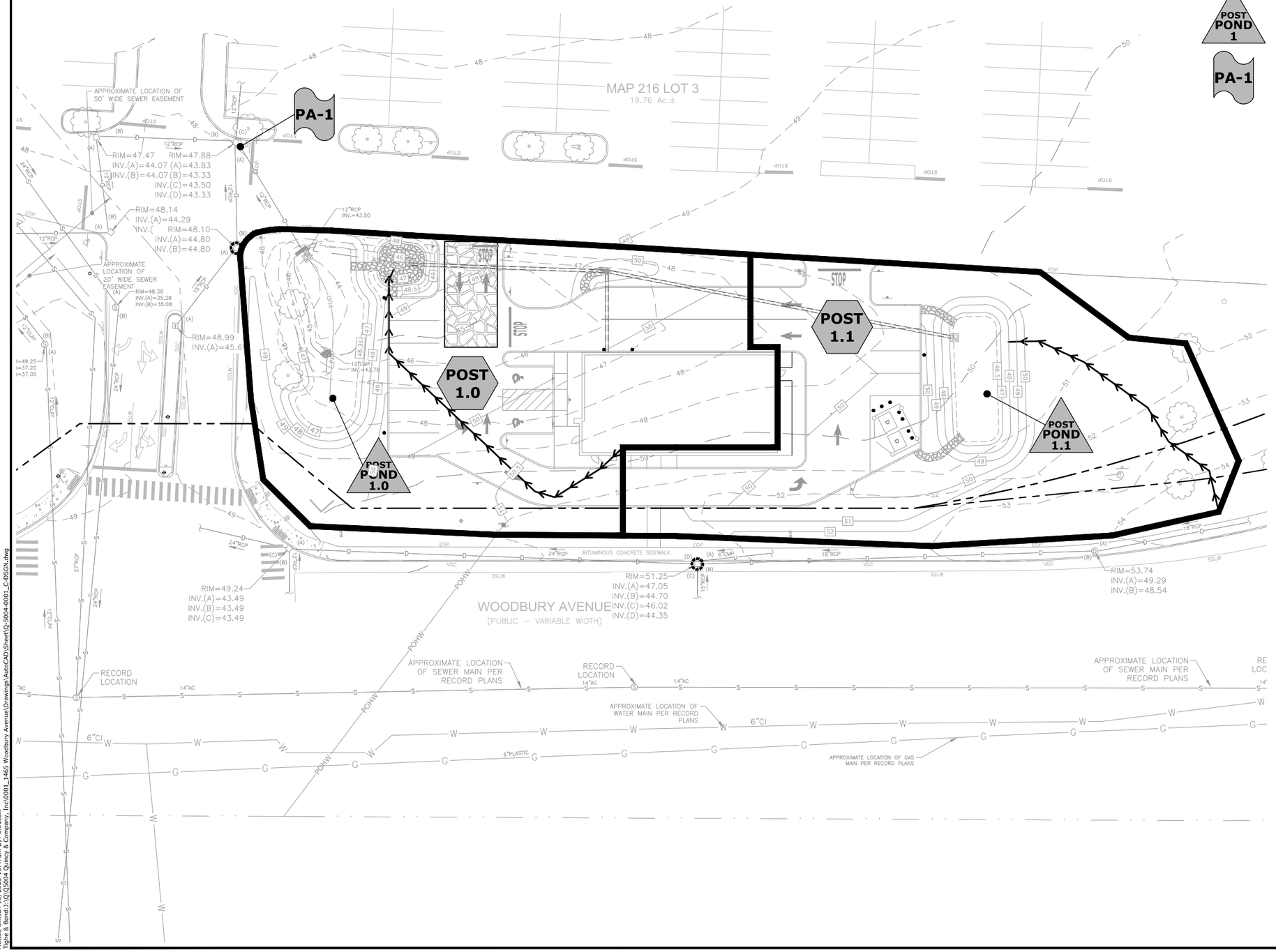
Pond 1.1: DP Peak Elev=48.93' Storage=2,487 cf Inflow=3.13 cfs 10,011 cf
Outflow=1.73 cfs 9,946 cf

Link PA-1: Inflow=2.74 cfs 20,852 cf
Primary=2.74 cfs 20,852 cf

Total Runoff Area = 37,535 sf Runoff Volume = 21,009 cf Average Runoff Depth = 6.72"
67.72% Pervious = 25,418 sf 32.28% Impervious = 12,117 sf

POST-DEVELOPMENT WATERSHED LEGEND

- POST-DEVELOPMENT WATERSHED BOUNDARY
- POST-DEVELOPMENT LONGEST FLOW PATH
- POST 1.0 — POST-DEVELOPMENT WATERSHED AREA DESIGNATION
- POST POND 1 — POST-DEVELOPMENT POND DESIGNATION
- PA-1 — POINT OF ANALYSIS



0 20' 40'
GRAPHIC SCALE

PROPOSED BANK PAD

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1465 WOODBURY AVE
PORTSMOUTH, NH

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A	6/16/2025	TAC Submission

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DRAWN BY:	NHW
DESIGNED/CHECKED BY:	NAH
APPROVED BY:	PMC

POST-DEVELOPMENT WATERSHED PLAN

SCALE: AS SHOWN

C-802

Last Saved: 6/13/2025
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POST-DEVELOPMENT WATERSHED LEGEND

- POST-DEVELOPMENT WATERSHED BOUNDARY
- POST-DEVELOPMENT LONGEST FLOW PATH
- POST 1.0 — POST-DEVELOPMENT WATERSHED AREA DESIGNATION
- POST POND 1 — POST-DEVELOPMENT POND DESIGNATION
- PA-1 — POINT OF ANALYSIS

MAP 216 LOT 3
19.76 Ac.±

WOODBURY AVENUE
(PUBLIC – VARIABLE WIDTH)

APPROXIMATE LOCATION OF 50' WIDE SEWER EASEMENT

APPROXIMATE LOCATION OF 20' WIDE SEWER EASEMENT

RIM=47.47 RIM=47.88
INV.(A)=44.07 (A)=43.83
INV.(B)=44.07(B)=43.33
INV.(C)=43.50
INV.(D)=43.33

RIM=48.14
INV.(A)=44.29
INV.(RIM=48.10
INV.(A)=44.80
INV.(B)=44.80

RIM=48.38
INV.(A)=35.28
INV.(B)=35.08

RIM=48.99
INV.(A)=45.6

RIM=49.24
INV.(A)=43.49
INV.(B)=43.49
INV.(C)=43.49

RIM=51.25
INV.(A)=47.05
INV.(B)=44.70
INV.(C)=46.02
INV.(D)=44.35

RIM=53.74
INV.(A)=49.29
INV.(B)=48.54

12"RCP INV.=43.50

12"CMP INV.=43.78

BITUMINOUS CONCRETE SIDEWALK

RECORD LOCATION

APPROXIMATE LOCATION OF SEWER MAIN PER RECORD PLANS

APPROXIMATE LOCATION OF WATER MAIN PER RECORD PLANS

APPROXIMATE LOCATION OF GAS MAIN PER RECORD PLANS

POST 1.0

POST POND 1.0

POST 1.1

POST POND 1.1

PA-1

Tighe&Bond

N

0 20' 40'
GRAPHIC SCALE

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POST-DEVELOPMENT WATERSHED PLAN

SCALE: AS SHOWN

C-802

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Section 4
Peak Rate Comparison

The following table summarizes and compares the pre- and post-development peak runoff rates from the 2-year, 10-year, 25-year and 50-year storm events at the point of analysis.

Table 4.1
Comparison of Pre- and Post-Development Flows (CFS)

	2-Year Storm	10-Year Storm	25-Year Storm	50-Year Storm
Pre-Development Watershed				
PA-1	1.79	3.42	4.73	5.97
Post-Development Watershed				
PA-1	0.41	0.86	1.18	2.74

Section 5
Mitigation Description

The stormwater management system has been designed to provide stormwater treatment as required by the City of Portsmouth Site Review Regulations.

5.1 Pre-Treatment Methods for Protecting Water Quality

Pre-treatment for the rain garden consists of a sediment forebay.

5.2 Treatment Methods for Protecting Water Quality.

The runoff from proposed impervious areas will be treated by a Rain Garden bioretention system. The Rain Garden is sized to treat the Water Quality Volume of the developments sub catchment areas. A BMP worksheets for the treatment practice has been included in Section 6 of this report.

The proposed stormwater management system is required to remove 80% of the annual Total Suspended Soils (TSS) loads and 50% of the annual Total Nitrogen (TN) loads per the City of Portsmouth's Site Plan regulations, Section 7.6.2.1.a.i. As shown in table 5.1 the pollutant removal efficiencies for the proposed treatment system exceeds the City of Portsmouth's removal requirements.

Table 5.1 – Pollutant Removal Efficiencies

BMP	Total Suspended Solids	Total Nitrogen	Total Phosphorus
Rain Garden w/Pretreatment[1]	95%	65%	65%

1. Pollutant removal efficiencies from NH Stormwater Manual Volume 2, Appendix E.

Section 6
BMP Worksheet

FILTRATION PRACTICE DESIGN CRITERIA
(Env-Wq 1508.08)

Type/Node Name: **Rain Garden 1**

Enter the type of filtration practice (e.g., bioretention system) and the node name in the drainage analysis, if applicable.

		Check if you reviewed the restrictions on unlined systems outlined in Env-Wq 1508.08(a).	
0.86	ac	A = Area draining to the practice	
0.35	ac	A_I = Impervious area draining to the practice	
0.41	decimal	I = Percent impervious area draining to the practice, in decimal form	
0.42	unitless	Rv = Runoff coefficient = 0.05 + (0.9 x I)	
0.36	ac-in	WQV= 1" x Rv x A	
1,300	cf	WQV conversion (ac-in x 43,560 sf/ac x 1ft/12")	
325	cf	25% x WQV (check calc for sediment forebay volume)	
975	cf	75% x WQV (check calc for surface sand filter volume)	
		Method of Pretreatment? (not required for clean or roof runoff)	
361	cf	V_{SED} = Sediment forebay volume, if used for pretreatment	**≥ 25%WQV**
Calculate time to drain if system IS NOT underdrained:			
1,443	sf	A_{SA} = Surface area of the practice	
N/A	iph	$Ksat_{DESIGN}$ = Design infiltration rate[1]	
		If Ksat (prior to factor of safety) is < 0.50 iph, has an underdrain been provided?	
Yes	Yes/No	(Use the calculations below)	
-	hours	T_{DRAIN} = Drain time = V / (A_{SA} * I_{DESIGN})	**≤ 72-hrs**
Calculate time to drain if system IS underdrained:			
47.00	ft	E_{WQV} = Elevation of WQV (attach stage-storage table)	
0.43	cfs	Q_{WQV} = Discharge at the E_{WQV} (attach stage-discharge table)	
1.68	hours	T_{DRAIN} = Drain time = 2WQV/Q_{WQV}	**≤ 72-hrs**
44.60	feet	E_{FC} = Elevation of the bottom of the filter course material[2]	
43.50	feet	E_{UD} = Invert elevation of the underdrain (UD), if applicable	
N/A	feet	E_{SHWT} = Elevation of SHWT (if none found, enter the lowest elevation of the test pit)	
N/A	feet	E_{ROCK} = Elevation of bedrock (if none found, enter the lowest elevation of the test pit)	
1.10	feet	$D_{FC\ to\ UD}$ = Depth to UD from the bottom of the filter course	**≥ 1'**
#VALUE!	feet	$D_{FC\ to\ ROCK}$ = Depth to bedrock from the bottom of the filter course	**≥ 1'**
#VALUE!	feet	$D_{FC\ to\ SHWT}$ = Depth to SHWT from the bottom of the filter course	**≥ 1'**
47.95	ft	Peak elevation of the 50-year storm event (infiltration can be used in analysis)	
48.25	ft	Elevation of the top of the practice	
YES		50 peak elevation ≤ Elevation of the top of the practice	**← yes**
If a surface sand filter or underground sand filter is proposed:			
YES	ac	Drainage Area check.	**< 10 ac**
	cf	V = Volume of storage[3] (attach a stage-storage table)	**≥ 75%WQV**
	inches	D_{FC} = Filter course thickness	**18", or 24" if within GPA**
Sheet		Note what sheet in the plan set contains the filter course specification.	
	Yes/No	Access grate provided?	**← yes**

If a bioretention area is proposed:			
YES	ac	Drainage Area no larger than 5 ac?	**← yes**
1,330	cf	V = Volume of storage[3] (attach a stage-storage table)	**≥ WQV**
18.0	inches	D_{FC} = Filter course thickness	**18", or 24" if within GPA**
Sheet	C-504	Note what sheet in the plan set contains the filter course specification	
3.0	:1	Pond side slopes	**≥ 3:1**
Sheet	C-504	Note what sheet in the plan set contains the planting plans and surface cover	
If porous pavement is proposed:			
		Type of pavement proposed (Concrete? Asphalt? Pavers? Etc.)	
	acres	A_{SA} = Surface area of the pervious pavement	
	:1	Ratio of the contributing area to the pervious surface area	**≤ 5:1**
	inches	D_{FC} = Filter course thickness	**12", or 18" if within GPA mod. 304.1 (see spec)**
Sheet		Note what sheet in the plan set contains the filter course spec.	

1. Rate of the limiting layer (either the filter course or the underlying soil). $Ksat_{design}$ includes factor of safey. See Env-Wq 1504.14 for guidance on determining the infiltration rate.

2. See lines 34, 40 and 48 for required depths of filter media.

3. Volume without depending on infiltration. The volume includes the storage above the filter (but below the invert of the outlet stucture, if any), the filter media voids, and the pretreatment area. The storage above the filter media shall not include the volume above the outlet structure, if any.

Designer's Notes:

Stage-Area-Storage for Pond 1.0: RG

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
43.50	1,443	0
43.55	1,443	29
43.60	1,443	58
43.65	1,443	87
43.70	1,443	115
43.75	1,443	144
43.80	1,443	173
43.85	1,443	202
43.90	1,443	231
43.95	1,443	260
44.00	1,443	289
44.05	1,443	317
44.10	1,443	346
44.15	1,443	375
44.20	1,443	404
44.25	1,443	433
44.30	1,443	462
44.35	1,443	491
44.40	1,443	519
44.45	1,443	548
44.50	1,443	577
44.55	1,443	606
44.60	1,443	635
44.65	1,443	642
44.70	1,443	649
44.75	1,443	657
44.80	1,443	664
44.85	1,443	671
44.90	1,443	678
44.95	1,443	685
45.00	1,443	693
45.05	1,443	700
45.10	1,443	707
45.15	1,443	714
45.20	1,443	722
45.25	1,443	729
45.30	1,443	736
45.35	1,443	743
45.40	1,443	750
45.45	1,443	758
45.50	1,443	765
45.55	1,443	772
45.60	1,443	779
45.65	1,443	786
45.70	1,443	794
45.75	1,443	801
45.80	1,443	808
45.85	1,443	815
45.90	1,443	823
45.95	1,443	830
46.00	1,443	837
46.05	1,443	844

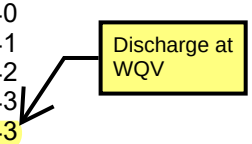
Volume Below Filter Media

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
46.10	1,443	851
46.15	1,443	859
46.20	1,443	866
46.25	1,443	873
46.30	1,443	880
46.35	1,443	887
46.40	1,476	960
46.45	1,509	1,035
46.50	1,542	1,111
46.55	1,575	1,189
46.60	1,608	1,269
46.65	1,641	1,350
46.70	1,674	1,433
46.75	1,707	1,517
46.80	1,740	1,604
46.85	1,773	1,691
46.90	1,806	1,781
46.95	1,839	1,872
47.00	1,872	1,965
47.05	1,910	2,059
47.10	1,948	2,156
47.15	1,986	2,254
47.20	2,024	2,354
47.25	2,063	2,457
47.30	2,101	2,561
47.35	2,139	2,667
47.40	2,177	2,775
47.45	2,215	2,884
47.50	2,253	2,996
47.55	2,291	3,110
47.60	2,329	3,225
47.65	2,367	3,343
47.70	2,405	3,462
47.75	2,444	3,583
47.80	2,482	3,706
47.85	2,520	3,831
47.90	2,558	3,958
47.95	2,596	4,087
48.00	**2,634**	**4,218**
48.05	2,634	4,218
48.10	2,634	4,218
48.15	2,634	4,218
48.20	2,634	4,218
48.25	2,634	4,218

Water Quality Volume

Stage-Discharge for Pond 1.0: RG

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
43.50	0.00	46.10	0.33
43.55	0.01	46.15	0.33
43.60	0.02	46.20	0.33
43.65	0.06	46.25	0.33
43.70	0.10	46.30	0.33
43.75	0.16	46.35	0.33
43.80	0.23	46.40	0.34
43.85	0.30	46.45	0.35
43.90	0.33	46.50	0.36
43.95	0.33	46.55	0.36
44.00	0.33	46.60	0.37
44.05	0.33	46.65	0.38
44.10	0.33	46.70	0.39
44.15	0.33	46.75	0.40
44.20	0.33	46.80	0.40
44.25	0.33	46.85	0.41
44.30	0.33	46.90	0.42
44.35	0.33	46.95	0.43
44.40	0.33	47.00	0.43
44.45	0.33	47.05	0.47
44.50	0.33	47.10	0.52
44.55	0.33	47.15	0.58
44.60	0.33	47.20	0.66
44.65	0.33	47.25	0.74
44.70	0.33	47.30	0.81
44.75	0.33	47.35	0.87
44.80	0.33	47.40	0.92
44.85	0.33	47.45	0.97
44.90	0.33	47.50	1.01
44.95	0.33	47.55	1.05
45.00	0.33	47.60	1.09
45.05	0.33	47.65	1.13
45.10	0.33	47.70	1.16
45.15	0.33	47.75	1.20
45.20	0.33	47.80	1.40
45.25	0.33	47.85	1.74
45.30	0.33	47.90	2.18
45.35	0.33	47.95	2.68
45.40	0.33	48.00	3.25
45.45	0.33	48.05	3.87
45.50	0.33	48.10	4.54
45.55	0.33	48.15	5.25
45.60	0.33	48.20	5.78
45.65	0.33	48.25	**6.03**
45.70	0.33		
45.75	0.33		
45.80	0.33		
45.85	0.33		
45.90	0.33		
45.95	0.33		
46.00	0.33		
46.05	0.33		



APPENDIX A

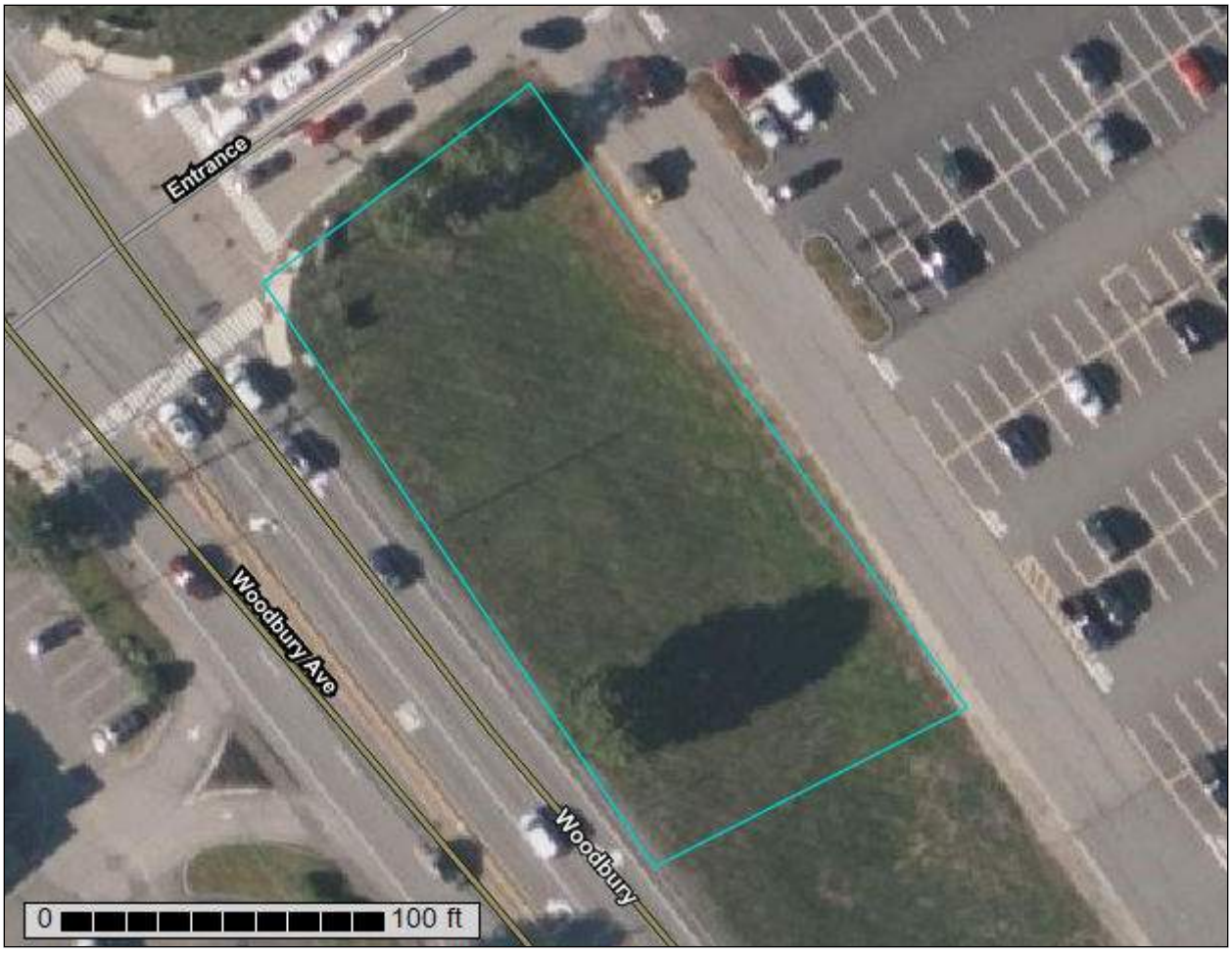
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Rockingham County, New Hampshire



May 5, 2025

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:514 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 5 10 20 30

Feet
0 20 40 80 120

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Rockingham County, New Hampshire
Survey Area Data: Version 27, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
699	Urban land	0.5	100.0%
Totals for Area of Interest		**0.5**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Rockingham County, New Hampshire

699—Urban land

Map Unit Composition

Urban land: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Minor Components

Not named

Percent of map unit: 15 percent
Hydric soil rating: No

References

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APPENDIX B

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Metadata for Point

Smoothing	Yes
State	
Location	
Latitude	43.088 degrees North
Longitude	70.788 degrees West
Elevation	10 feet
Date/Time	Wed May 21 2025 13:32:51 GMT-0400 (Eastern Daylight Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.40	0.50	0.65	0.81	1.04	**1yr**	0.70	0.98	1.21	1.56	2.02	2.65	2.91	**1yr**	2.35	2.80	3.20	3.93	4.53	**1yr**
2yr	0.32	0.50	0.62	0.81	1.02	1.30	**2yr**	0.88	1.18	1.51	1.93	2.48	3.20	3.56	**2yr**	2.83	3.42	3.92	4.66	5.31	**2yr**
5yr	0.37	0.58	0.73	0.97	1.24	1.60	**5yr**	1.07	1.46	1.88	2.42	3.13	4.05	4.56	**5yr**	3.59	4.38	5.02	5.91	6.68	**5yr**
10yr	0.41	0.64	0.81	1.11	1.44	1.88	**10yr**	1.24	1.72	2.22	2.88	3.73	4.85	5.51	**10yr**	4.29	5.30	6.05	7.08	7.95	**10yr**
25yr	0.47	0.75	0.96	1.32	1.76	2.32	**25yr**	1.52	2.13	2.76	3.61	4.71	6.15	7.07	**25yr**	5.44	6.80	7.75	8.98	10.01	**25yr**
50yr	0.53	0.85	1.09	1.52	2.05	2.73	**50yr**	1.77	2.51	3.26	4.29	5.63	7.36	8.55	**50yr**	6.51	8.22	9.36	10.76	11.93	**50yr**
100yr	0.59	0.95	1.23	1.75	2.39	3.22	**100yr**	2.06	2.95	3.87	5.12	6.73	8.82	10.33	**100yr**	7.80	9.94	11.30	12.89	14.22	**100yr**
200yr	0.67	1.09	1.41	2.02	2.79	3.79	**200yr**	2.41	3.49	4.57	6.08	8.03	10.57	12.50	**200yr**	9.35	12.02	13.64	15.45	16.96	**200yr**
500yr	0.79	1.30	1.69	2.45	3.43	4.70	**500yr**	2.96	4.34	5.70	7.63	10.15	13.43	16.08	**500yr**	11.88	15.46	17.52	19.65	21.42	**500yr**

Lower Confidence Limits

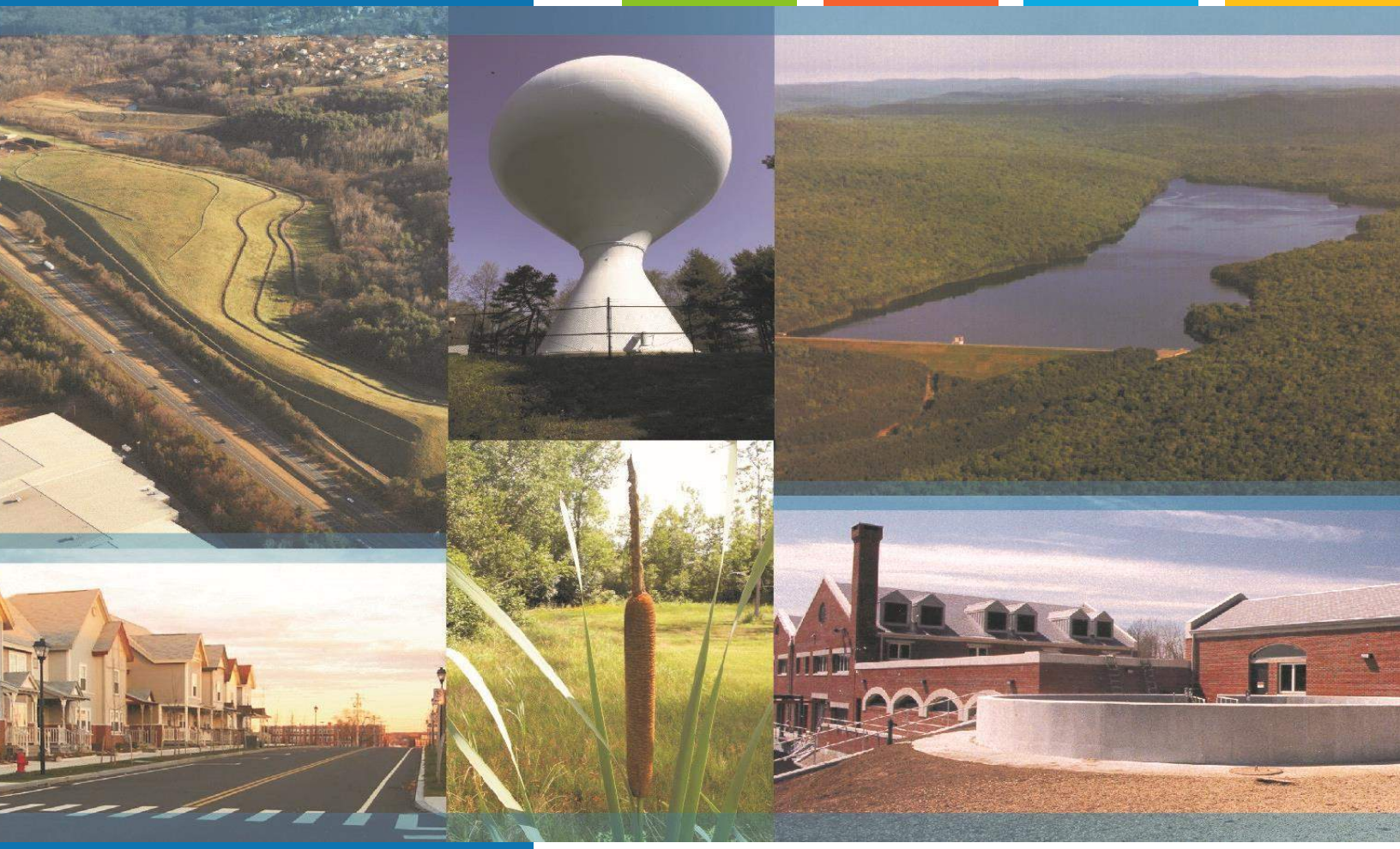
	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.23	0.36	0.44	0.59	0.73	0.89	**1yr**	0.63	0.87	0.92	1.32	1.67	2.22	2.49	**1yr**	1.96	2.39	2.84	3.16	3.87	**1yr**
2yr	0.31	0.49	0.60	0.81	1.00	1.19	**2yr**	0.86	1.16	1.36	1.82	2.34	3.05	3.44	**2yr**	2.70	3.31	3.81	4.53	5.05	**2yr**
5yr	0.35	0.54	0.67	0.92	1.17	1.40	**5yr**	1.01	1.37	1.61	2.12	2.74	3.78	4.18	**5yr**	3.34	4.02	4.69	5.51	6.22	**5yr**
10yr	0.38	0.59	0.73	1.02	1.32	1.60	**10yr**	1.14	1.56	1.81	2.40	3.07	4.36	4.85	**10yr**	3.86	4.66	5.42	6.38	7.17	**10yr**
25yr	0.44	0.67	0.83	1.18	1.56	1.90	**25yr**	1.34	1.86	2.10	2.77	3.56	4.67	5.88	**25yr**	4.14	5.65	6.61	7.76	8.65	**25yr**
50yr	0.48	0.73	0.91	1.31	1.76	2.17	**50yr**	1.52	2.12	2.35	3.10	3.96	5.28	6.79	**50yr**	4.67	6.53	7.69	9.00	9.98	**50yr**
100yr	0.53	0.81	1.01	1.46	2.00	2.47	**100yr**	1.73	2.41	2.62	3.45	4.39	5.92	7.84	**100yr**	5.24	7.54	8.93	10.45	11.51	**100yr**
200yr	0.59	0.89	1.12	1.63	2.27	2.82	**200yr**	1.96	2.75	2.93	3.83	4.85	6.63	9.05	**200yr**	5.86	8.70	10.37	12.15	13.30	**200yr**
500yr	0.68	1.02	1.31	1.90	2.70	3.37	**500yr**	2.33	3.29	3.40	4.38	5.54	7.69	10.93	**500yr**	6.81	10.51	12.63	14.85	16.08	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.44	0.54	0.72	0.89	1.08	**1yr**	0.76	1.06	1.25	1.75	2.21	2.99	3.14	**1yr**	2.64	3.02	3.57	4.37	5.03	**1yr**
2yr	0.33	0.52	0.64	0.86	1.06	1.26	**2yr**	0.92	1.24	1.48	1.96	2.51	3.42	3.68	**2yr**	3.02	3.54	4.07	4.82	5.62	**2yr**
5yr	0.40	0.61	0.76	1.04	1.33	1.61	**5yr**	1.15	1.58	1.88	2.53	3.24	4.32	4.94	**5yr**	3.83	4.75	5.35	6.34	7.12	**5yr**
10yr	0.46	0.71	0.89	1.24	1.60	1.96	**10yr**	1.38	1.92	2.27	3.10	3.94	5.32	6.17	**10yr**	4.71	5.93	6.77	7.80	8.71	**10yr**
25yr	0.57	0.87	1.08	1.54	2.03	2.55	**25yr**	1.75	2.49	2.94	4.05	5.12	7.77	8.29	**25yr**	6.87	7.97	9.07	10.28	11.35	**25yr**
50yr	0.66	1.01	1.26	1.81	2.44	3.10	**50yr**	2.10	3.03	3.58	4.97	6.26	9.73	10.39	**50yr**	8.61	9.99	11.33	12.65	13.89	**50yr**
100yr	0.78	1.18	1.48	2.13	2.92	3.77	**100yr**	2.52	3.68	4.35	6.12	7.68	12.17	13.01	**100yr**	10.77	12.51	14.16	15.60	17.01	**100yr**
200yr	0.91	1.37	1.74	2.51	3.50	4.59	**200yr**	3.02	4.49	5.30	7.53	9.41	15.28	16.32	**200yr**	13.52	15.70	17.71	19.22	20.82	**200yr**
500yr	1.13	1.68	2.16	3.13	4.45	5.95	**500yr**	3.84	5.82	6.87	9.93	12.35	20.64	22.03	**500yr**	18.27	21.19	23.82	25.34	27.23	**500yr**

Powered by ACIS Northeast Regional Climate Center

Coastal and Great Bay Region Precipitation Increase		
	24-hr Storm Event (in.)	24-hr Storm Event + 15% (in.)
2 Year	3.20	3.68
10 Year	4.85	5.58
25 Year	6.15	7.07
50 Year	7.36	8.46



Proposed Bank Pad
1465 Woodbury Avenue
Portsmouth, NH

Long-Term Operation & Maintenance Plan

Bromley-Portsmouth, LLC &
RCQ-Portsmouth, LLC
c/o Quincy & Company, Inc.

June 16, 2025

Tighe&Bond

100% Recyclable

Table of Contents

Section 1 Long-Term Operation & Maintenance Plan

Section 2 Invasive Species

Section 3 Annual Updates and Log Requirements

Section 1
Long-Term Operation & Maintenance Plan

It is the intent of this Operation and Maintenance Plan to identify the areas of this site that need special attention and consideration, as well as implementing a plan to assure routine maintenance. By identifying the areas of concern as well as implementing a frequent and routine maintenance schedule the site will maintain a high-quality stormwater runoff.

1.1 Contact/Responsible Party

Bromley-Portsmouth, LLC & RCQ-Portsmouth, LLC
c/o Quincy & Co, Inc.
57 Dedham Avenue
Needham, MA 02492

(Note: The contact information for the Contact/Responsible Party shall be kept current. If ownership changes, the Operation and Maintenance Plan must be transferred to the new party.)

1.2 Maintenance Items

Maintenance of the following items shall be recorded:

- Litter/Debris Removal
- Landscaping
- Pavement Sweeping
- Detention Basin
- Rain Garden

The following maintenance items and schedule represent the minimum action required. Periodic site inspections shall be conducted, and all measures must be maintained in effective operating condition. The following items shall be observed during site inspection and maintenance:

- Inspect vegetated areas, particularly slopes and embankments for areas of erosion. Replant and restore as necessary
- Inspect site for trash and debris
- Inspect/Maintain Rain Garden for trash and debris
- Inspect/Maintain Detention Basin for trash and debris

1.3 Overall Site Operation & Maintenance Schedule

Overall Site Operation and Maintenance Schedule	
Maintenance Item	Frequency of Maintenance
Litter/Debris Removal	Weekly
Pavement Sweeping - Sweep impervious areas to remove sand and litter.	2 – 4 times annually
Rip Rap Aprons - Trash and debris to be removed. - Repair damages. - Remove vegetation as necessary.	Annually
Landscaping - Landscaped areas to be maintained and mulched.	Maintained as required and mulched each Spring
Culverts - Remove debris / sediment build up	Spring and Fall
Drain Manholes (DMH) Cleaning - DMH to be cleaned of solids and oils	Annually
Detention Basin - Remove debris / sediment build up. - Embankment to be mowed. - Any required maintenance should be addressed.	Periodically (At least 2 times annually)
-Rain Garden - Trash and debris to be removed. - Any required maintenance shall be addressed.	Two (2) times annually and after any rainfall event exceeding 2.5” in a 24-hr period

Disposal Requirements

Disposal of debris, trash, sediment and other waste material should be done at suitable disposal/recycling sites and in compliance with all applicable local, state and federal waste regulations.

1.4 Rain Garden Requirements

Rain Garden Inspection/Maintenance Requirements		
Inspection/ Maintenance	**Frequency**	**Action**
Monitor to ensure that Rain Gardens function effectively after storms	Two (2) times annually and after any rainfall event exceeding 2.5" in a 24-hr period	- Trash and debris to be removed - Any required maintenance shall be addressed
Inspect Vegetation	Annually	- Inspect the condition of all Rain Garden vegetation - Prune back overgrowth - Replace dead vegetation - Remove any invasive species
Inspect Drawdown Time - The system shall drawdown within 48-hours following a rainfall event.	Annually	- Assess the condition of the facility to determine measures required to restore the filtration function, including but not limited to removal of accumulated sediments or reconstruction of the filter.

1.5 Rip Rap Apron Requirements

Rip Rap Inspection/Maintenance Requirements		
Inspection/ Maintenance	**Frequency**	**Action**
Visual Inspection	Annually	- Visually inspect for damage and deterioration - Repair damages immediately

1.6 Snow & Ice Management for Standard Asphalt and Walkways

Snow storage areas shall be located such that no direct untreated discharges are possible to receiving waters from the storage site (snow storage areas have been shown on the Site Plan). The property manager will be responsible for timely snow removal from all private sidewalks, driveways, and parking areas. Any snow accumulation beyond a height of 3' in the snow storage areas will be hauled off-site and legally disposed of. Salt storage areas shall be covered or located such that no direct untreated discharges are possible to receiving waters from the storage site. Salt and sand shall be used to the minimum extent practical (refer to the attached for de-icing application rate guideline from the New Hampshire Stormwater Management Manual, Volume 2,).

Deicing Application Rate Guidelines

24' of pavement (typcial two-lane road)

These rates are not fixed values, but rather the middle of a range to be selected and adjusted by an agency according to its local conditions and experience.

			Pounds per two-lane mile			
Pavement Temp. (°F) and Trend (↑↓)	Weather Condition	Maintenance Actions	Salt Prewetted / Pretreated with Salt Brine	Salt Prewetted / Pretreated with Other Blends	Dry Salt*	Winter Sand (abrasives)
> 30° ↑	Snow	Plow, treat intersections only	80	70	100*	Not recommended
	Freezing Rain	Apply Chemical	80 - 160	70 - 140	100 - 200*	Not recommended
30° ↓	Snow	Plow and apply chemical	80 - 160	70 - 140	100 - 200*	Not recommended
	Freezing Rain	Apply Chemical	150 - 200	130 - 180	180 - 240*	Not recommended
25° - 30° ↑	Snow	Plow and apply chemical	120 - 160	100 - 140	150 - 200*	Not recommended
	Freezing Rain	Apply Chemical	150 - 200	130 - 180	180 - 240*	Not recommended
25° - 30° ↓	Snow	Plow and apply chemical	120 - 160	100 - 140	150 - 200*	Not recommended
	Freezing Rain	Apply Chemical	160 - 240	140 - 210	200 - 300*	400
20° - 25° ↑	Snow or Freezing Rain	Plow and apply chemical	160 - 240	140 - 210	200 - 300*	400
20° - 25° ↓	Snow	Plow and apply chemical	200 - 280	175 - 250	250 - 350*	Not recommended
	Freezing Rain	Apply Chemical	240 - 320	210 - 280	300 - 400*	400
15° - 20° ↑	Snow	Plow and apply chemical	200 - 280	175 - 250	250 - 350*	Not recommended
	Freezing Rain	Apply Chemical	240 - 320	210 - 280	300 - 400*	400
15° - 20° ↓	Snow or Freezing Rain	Plow and apply chemical	240 - 320	210 - 280	300 - 400*	500 for freezing rain
0° - 15° ↑↓	Snow	Plow, treat with blends, sand hazardous areas	Not recommended	300 - 400	Not recommended	500 - 750 spot treatment as needed
< 0°	Snow	Plow, treat with blends, sand hazardous areas	Not recommended	400 - 600**	Not recommended	500 - 750 spot treatment as needed

* Dry salt is not recommended. It is likely to blow off the road before it melts ice.

** A blend of 6 - 8 gal/ton $MgCl_2$ or $CaCl_2$ added to NaCl can melt ice as low as -10°.

Anti-icing Route Data Form				
Truck Station:				
Date:				
Air Temperature	Pavement Temperature	Relative Humidity	Dew Point	Sky
Reason for applying:				
Route:				
Chemical:				
Application Time:				
Application Amount:				
Observation (first day):				
Observation (after event):				
Observation (before next application):				
Name:				

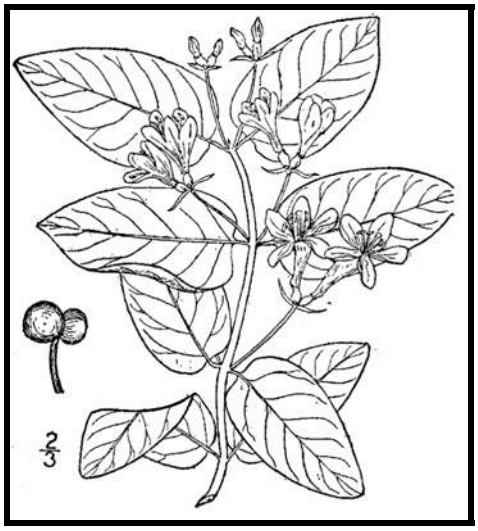
Section 2
Invasive Species

With respect to a particular ecosystem, any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem is classified as an invasive species. Refer to the following fact sheet prepared by the University of New Hampshire Cooperative Extension entitled Methods for Disposing Non-Native Invasive Plants for recommended methods to dispose of invasive plant species.

UNIVERSITY of NEW HAMPSHIRE COOPERATIVE EXTENSION

Methods for Disposing Non-Native Invasive Plants

Prepared by the Invasives Species Outreach Group, volunteers interested in helping people control invasive plants. Assistance provided by the Piscataquog Land Conservancy and the NH Invasives Species Committee. Edited by Karen Bennett, Extension Forestry Professor and Specialist.



Tatarian honeysuckle
Lonicera tatarica
USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 3: 282.

Non-native invasive plants crowd out natives in natural and managed landscapes. They cost taxpayers billions of dollars each year from lost agricultural and forest crops, decreased biodiversity, impacts to natural resources and the environment, and the cost to control and eradicate them.

Invasive plants grow well even in less than desirable conditions such as sandy soils along roadsides, shaded wooded areas, and in wetlands. In ideal conditions, they grow and spread even faster. There are many ways to remove these non-native invasives, but once removed, care is needed to dispose the removed plant material so the plants don't grow where disposed.

Knowing how a particular plant reproduces indicates its method of spread and helps determine the appropriate disposal method. Most are spread by seed and are dispersed by wind, water, animals, or people. Some reproduce by vegetative means from pieces of stems or roots forming new plants. Others spread through both seed and vegetative means.

Because movement and disposal of viable plant parts is restricted (see NH Regulations), viable invasive parts can't be brought to most transfer stations in the state. Check with your transfer station to see if there is an approved, designated area for invasives disposal. This fact sheet gives recommendations for rendering plant parts non-viable.

Control of invasives is beyond the scope of this fact sheet. For information about control visit www.nhinvasives.org or contact your UNH Cooperative Extension office.

New Hampshire Regulations

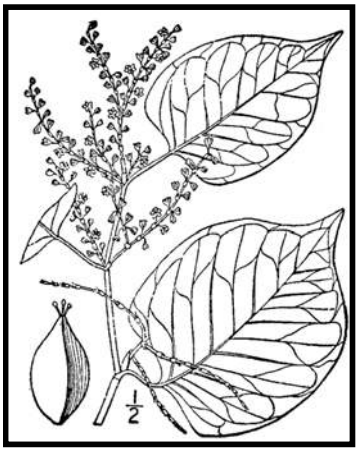
Prohibited invasive species shall only be disposed of in a manner that renders them nonliving and nonviable. (Agr. 3802.04)

No person shall collect, transport, import, export, move, buy, sell, distribute, propagate or transplant any living and viable portion of any plant species, which includes all of their cultivars and varieties, listed in Table 3800.1 of the New Hampshire prohibited invasive species list. (Agr 3802.01)

How and When to Dispose of Invasives?

To prevent seed from spreading remove invasive plants before seeds are set (produced). Some plants continue to grow, flower and set seed even after pulling or cutting. Seeds can remain viable in the ground for many years. If the plant has flowers or seeds, place the flowers and seeds in a heavy plastic bag "head first" at the weeding site and transport to the disposal site. The following are general descriptions of disposal methods. See the chart for recommendations by species.

Burning: Large woody branches and trunks can be used as firewood or burned in piles. For outside burning, a written fire permit from the local forest fire warden is required unless the ground is covered in snow. Brush larger than 5 inches in diameter can't be burned. Invasive plants with easily airborne seeds like black swallow-wort with mature seed pods (indicated by their brown color) shouldn't be burned as the seeds may disperse by the hot air created by the fire.



Japanese knotweed
Polygonum cuspidatum
USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 1: 676.

Bagging (solarization): Use this technique with softer-tissue plants. Use heavy black or clear plastic bags (contractor grade), making sure that no parts of the plants poke through. Allow the bags to sit in the sun for several weeks and on dark pavement for the best effect.

Tarping and Drying: Pile material on a sheet of plastic and cover with a tarp, fastening the tarp to the ground and monitoring it for escapes. Let the material dry for several weeks, or until it is clearly nonviable.

Chipping: Use this method for woody plants that don't reproduce vegetatively.

Burying: This is risky, but can be done with watchful diligence. Lay thick plastic in a deep pit before placing the cut up plant material in the hole. Place the material away from the edge of the plastic before covering it with more heavy plastic. Eliminate as much air as possible and toss in soil to weight down the material in the pit. Note that the top of the buried material should be at least three feet underground. Japanese knotweed should be at least 5 feet underground!

Drowning: Fill a large barrel with water and place soft-tissue plants in the water. Check after a few weeks and look for rotted plant material (roots, stems, leaves, flowers). Well-rotted plant material may be composted. A word of caution- seeds may still be viable after using this method. Do this before seeds are set. This method isn't used often. Be prepared for an awful stink!

Composting: Invasive plants can take root in compost. Don't compost any invasives unless you know there is no viable (living) plant material left. Use one of the above techniques (bagging, tarping, drying, chipping, or drowning) to render the plants nonviable before composting. Closely examine the plant before composting and avoid composting seeds.

Be diligent looking for seedlings for *years* in areas where removal and disposal took place.

Suggested Disposal Methods for Non-Native Invasive Plants

This table provides information concerning the disposal of removed invasive plant material. If the infestation is treated with herbicide and left in place, these guidelines don't apply. Don't bring invasives to a local transfer station, unless there is a designated area for their disposal, or they have been rendered non-viable. This listing includes wetland and upland plants from the New Hampshire Prohibited Invasive Species List. The disposal of aquatic plants isn't addressed.

<table>
<tr><th>Woody Plants</th><th>Method of Reproducing</th><th>Methods of Disposal</th></tr>
<tr><td rowspan="2">Norway maple
(Acer platanoides)
European barberry
(Berberis vulgaris)
Japanese barberry
(Berberis thunbergii)
autumn olive
(Elaeagnus umbellata)
burning bush
(Euonymus alatus)
Morrow's honeysuckle
(Lonicera morrowii)
Tatarian honeysuckle
(Lonicera tatarica)
showy bush honeysuckle
(Lonicera x bella)
common buckthorn
(Rhamnus cathartica)
glossy buckthorn
(Frangula alnus)</td><td rowspan="2">Fruit and Seeds
  </td><td>Prior to fruit/seed ripening
Seedlings and small plants
▪ Pull or cut and leave on site with roots exposed. No special care needed.
Larger plants
▪ Use as firewood.
▪ Make a brush pile.
▪ Chip.
▪ Burn.</td></tr>
<tr><td>After fruit/seed is ripe
Don't remove from site.
▪ Burn.
▪ Make a covered brush pile.
▪ Chip once all fruit has dropped from branches.
▪ Leave resulting chips on site and monitor.</td></tr>
<tr><td rowspan="2">oriental bittersweet
(Celastrus orbiculatus)
multiflora rose
(Rosa multiflora)</td><td rowspan="2">Fruits, Seeds, Plant Fragments
  </td><td>Prior to fruit/seed ripening
Seedlings and small plants
▪ Pull or cut and leave on site with roots exposed. No special care needed.
Larger plants
▪ Make a brush pile.
▪ Burn.</td></tr>
<tr><td>After fruit/seed is ripe
Don't remove from site.
▪ Burn.
▪ Make a covered brush pile.
▪ Chip – only after material has fully dried (1 year) and all fruit has dropped from branches. Leave resulting chips on site and monitor.</td></tr>
</table>

Non-Woody Plants	Method of Reproducing	Methods of Disposal
garlic mustard *(Alliaria petiolata)* spotted knapweed *(Centaurea maculosa)* ▪ Sap of related knapweed can cause skin irritation and tumors. Wear gloves when handling. black swallow-wort *(Cynanchum nigrum)* ▪ May cause skin rash. Wear gloves and long sleeves when handling. pale swallow-wort *(Cynanchum rossicum)* giant hogweed *(Heracleum mantegazzianum)* ▪ Can cause major skin rash. Wear gloves and long sleeves when handling. dame's rocket *(Hesperis matronalis)* perennial pepperweed *(Lepidium latifolium)* purple loosestrife *(Lythrum salicaria)* Japanese stilt grass *(Microstegium vimineum)* mile-a-minute weed *(Polygonum perfoliatum)*	**Fruits and Seeds** 	**Prior to flowering** Depends on scale of infestation Small infestation ▪ Pull or cut plant and leave on site with roots exposed. Large infestation ▪ Pull or cut plant and pile. (You can pile onto or cover with plastic sheeting). ▪ Monitor. Remove any re-sprouting material. **During and following flowering** Do nothing until the following year or remove flowering heads and bag and let rot. Small infestation ▪ Pull or cut plant and leave on site with roots exposed. Large infestation ▪ Pull or cut plant and pile remaining material. (You can pile onto plastic or cover with plastic sheeting). ▪ Monitor. Remove any re-sprouting material.
common reed (*Phragmites australis*) Japanese knotweed *(Polygonum cuspidatum)* Bohemian knotweed *(Polygonum x bohemicum)*	**Fruits, Seeds, Plant Fragments** Primary means of spread in these species is by plant parts. Although all care should be given to preventing the dispersal of seed during control activities, the presence of seed doesn't materially influence disposal activities.	**Small infestation** ▪ Bag all plant material and let rot. ▪ Never pile and use resulting material as compost. ▪ Burn. **Large infestation** ▪ Remove material to unsuitable habitat (dry, hot and sunny or dry and shaded location) and scatter or pile. ▪ Monitor and remove any sprouting material. ▪ Pile, let dry, and burn.

January 2010

Managing Invasive Plants
Methods of Control

by Christopher Mattrick

They're out there. The problem of invasive plants is as close as your own backyard.

Maybe a favorite dogwood tree is struggling in the clutches of an Oriental bittersweet vine. Clawlike canes of multiflora rose are scratching at the side of your house. That handsome burning bush you planted few years ago has become a whole clump in practically no time … but what happened to the azalea that used to grow right next to it?

If you think controlling or managing invasive plants on your property is a daunting task, you're not alone. Though this topic is getting lots of attention from federal, state, and local government agencies, as well as the media, the basic question for most homeowners is simply, "How do I get rid of the invasive plants in my own landscape?" Fortunately, the best place to begin to tackle this complex issue is in our own backyards and on local conservation lands. We hope the information provided here will help you take back your yard. We won't kid you—there's some work involved, but the payoff in beauty, wildlife habitat, and peace of mind makes it all worthwhile.

PLAN OF ATTACK

Three broad categories cover most invasive plant control: mechanical, chemical, and biological. Mechanical control means physically removing plants from the environment through cutting or pulling. Chemical control uses herbicides to kill plants and inhibit regrowth. Techniques and chemicals used will vary depending on the species. Biological controls use plant diseases or insect predators, typically from the targeted species' home range. Several techniques may be effective in controlling a single species, but there is usually one preferred method—the one that is most resource efficient with minimal impact on non-target species and the environment.

Spraying chemicals to control invasive plants.

MECHANICAL CONTROL METHODS

Mechanical treatments are usually the first ones to look at when evaluating an invasive plant removal project. These procedures do not require special licensing or introduce chemicals into the environment. They do require permits in some situations, such as wetland zones. [See sidebar on page 23.] Mechanical removal is highly labor intensive and creates a significant amount of site disturbance, which can lead to rapid reinvasion if not handled properly.

Pulling and digging

Many herbaceous plants and some woody species (up to about one inch in diameter), if present in limited quantities, can be pulled out or dug up. It's important to remove as much of the root system as possible; even a small portion can restart the infestation. Pull plants by hand or use a digging fork, as shovels can shear off portions of the root system, allowing for regrowth. To remove larger woody stems (up to about three inches in diameter), use a Weed Wrench™, Root Jack, or Root Talon. These tools, available from several manufacturers, are designed to remove the aboveground portion of the plant as well as the entire root system. It's easiest to undertake this type of control in the spring or early summer when soils are moist and plants come out more easily.

Using tools to remove woody stems.

Volunteers hand pulling invasive plants.

Suffocation

Try suffocating small seedlings and herbaceous plants. Place double or triple layers of thick UV-stabilized plastic sheeting, either clear or black (personally I like clear), over the infestation and secure the plastic with stakes or weights. Make sure the plastic extends at least five feet past the edge of infestation on all sides. Leave the plastic in place for at least two years. This technique will kill everything beneath the plastic—invasive and non-invasive plants alike. Once the plastic is removed, sow a cover crop such as annual rye to prevent new invasions.

Cutting or mowing

This technique is best suited for locations you can visit and treat often. To be effective, you will need to mow or cut infested areas three or four times a year for up to five years. The goal is to interrupt the plant's ability to photosynthesize by removing as much leafy material as possible. Cut the plants at ground level and remove all resulting debris from the site. With this treatment, the infestation may actually appear to get worse at first, so you will need to be as persistent as the invasive plants themselves. Each time you cut the plants back, the root system gets slightly larger, but must also rely on its energy reserves to push up new growth. Eventually, you will exhaust these reserves and the plants will die. This may take many years, so you have to remain committed to this process once you start; otherwise the treatment can backfire, making the problem worse.

CHEMICAL CONTROL METHODS

Herbicides are among the most effective and resource-efficient tools to treat invasive species. Most of the commonly known invasive plants can be treated using only two herbicides—glyphosate (the active ingredient in Roundup™ and Rodeo™) and triclopyr (the active ingredient in Brush-B-Gone™ and Garlon™). Glyphosate is non-selective, meaning it kills everything it contacts. Triclopyr is selective and does not injure monocots (grasses, orchids, lilies, etc.). Please read labels and follow directions precisely for both environmental and personal safety. These are relatively benign herbicides, but improperly used they can still cause both short- and long-term health and environmental problems. Special aquatic formulations are required when working in wetland zones. You are required to have a state-issued pesticide applicator license when applying these chemicals on land you do not own. To learn more about the pesticide regulations in your state, visit or call your state's pesticide control division, usually part of the state's Department of Agriculture. In wetland areas, additional permits are usually required by the Wetlands Protection Act. [See sidebar on page 23.]

Foliar applications

When problems are on a small scale, this type of treatment is usually applied with a backpack sprayer or even a small handheld spray bottle. It is an excellent way to treat large monocultures of herbaceous plants, or to spot-treat individual plants that are difficult to remove mechanically, such as goutweed, swallowwort, or purple loosestrife. It is also an effective treatment for some woody species, such as Japanese barberry, multiflora rose, Japanese honeysuckle, and Oriental bittersweet that grow in dense masses or large numbers over many acres. The herbicide mixture should contain no more than five percent of the active ingredient, but it is important to follow the instructions on the product label. This treatment is most effective when the plants are actively growing, ideally when they are flowering or beginning to form fruit. It has been shown that plants are often more susceptible to this type of treatment if the existing stems are cut off and the regrowth is treated. This is especially true for Japanese knotweed. The target plants should be thoroughly wetted with the herbicide on a day when there is no rain in the forecast for the next 24 to 48 hours.

Cut stem treatments

There are several different types of cut stem treatments, but here we will review only the one most commonly used. All treatments of this type require a higher concentration of the active ingredient than is used in foliar applications. A 25 to 35 percent solution of the active ingredient should be used for cut stem treatments, but read and follow all label instructions. In most cases, the appropriate herbicide is glyphosate, except for Oriental bittersweet, on which triclopyr should be used. This treatment can be used on all woody stems, as well as phragmites and Japanese knotweed.

For woody stems, treatments are most effective when applied in the late summer and autumn—between late August and November. Stems should be cut close to the ground, but not so close that you will lose track of them. Apply herbicide directly to the cut surface as soon as possible after cutting. Delaying the application will reduce the effectiveness of the treatment. The herbicide can be applied with a sponge, paintbrush, or spray bottle.

Cut stem treatment tools.

For phragmites and Japanese knotweed, treatment is the same, but the timing and equipment are different. Plants should be treated anytime from mid-July through September, but the hottest, most humid days of the summer are best for this method. Cut the stems halfway between two leaf nodes at a comfortable height. Inject (or squirt) herbicide into the exposed hollow stem. All stems in an infestation should be treated. A wash bottle is the most effective application tool, but you can also use an eyedropper, spray bottle, or one of the recently developed high-tech injection systems.

It is helpful to mix a dye in with the herbicide solution. The dye will stain the treated surface and mark the areas that have been treated, preventing unnecessary reapplication. You can buy a specially formulated herbicide dye, or use food coloring or laundry dye.

There is not enough space in this article to describe all the possible ways to control invasive plants. You can find other treatments, along with more details on the above-described methods, and species-specific recommendations on The Nature Conservancy Web site (tncweeds.ucdavis.edu). An upcoming posting on the Invasive Plant Atlas of New England (www.ipane.org) and the New England Wild Flower Society (www.newfs.org) Web sites will also provide further details.

Hollow stem injection tools.

Biological controls—still on the horizon

Biological controls are moving into the forefront of control methodology, but currently the only widely available and applied biocontrol relates to purple loosestrife. More information on purple loosestrife and other biological control projects can be found at www.invasiveplants.net.

DISPOSAL OF INVASIVE PLANTS

Proper disposal of removed invasive plant material is critical to the control process. Leftover plant material can cause new infestations or reinfest the existing project area. There are many appropriate ways to dispose of invasive plant debris. I've listed them here in order of preference.

1. **Burn it**—Make a brush pile and burn the material following local safety regulations and restrictions, or haul it to your town's landfill and place it in their burn pile.

2. **Pile it**—Make a pile of the woody debris. This technique will provide shelter for wildlife as well.

3. **Compost it**—Place all your herbaceous invasive plant debris in a pile and process as compost. Watch the pile closely for resprouts and remove as necessary. Do not use the resulting compost in your garden. The pile is for invasive plants only.

Injecting herbicide into the hollow stem of phragmites.

4. **Dry it/cook it**—Place woody debris out on your driveway or any asphalt surface and let it dry out for a month. Place herbaceous material in a doubled-up black trash bag and let it cook in the sun for one month. At the end of the month, the material should be non-viable and you can dump it or dispose of it with the trash. The method assumes there is no viable seed mixed in with the removed material.

Care should be taken in the disposal of all invasive plants, but several species need extra attention. These are the ones that have the ability to sprout vigorously from plant fragments and should ideally be burned or dried prior to disposal: Oriental bittersweet, multiflora rose, Japanese honeysuckle, phragmites, and Japanese knotweed.

Christopher Mattrick is the former Senior Conservation Programs Manager for New England Wild Flower Society, where he managed conservation volunteer and invasive and rare plant management programs. Today, Chris and his family work and play in the White Mountains of New Hampshire, where he is the Forest Botanist and Invasive Species Coordinator for the White Mountain National Forest.

Controlling Invasive Plants in Wetlands

Special concerns; special precautions

Control of invasive plants in or around wetlands or bodies of water requires a unique set of considerations. Removal projects in wetland zones can be legal and effective if handled appropriately. In many cases, herbicides may be the least disruptive tools with which to remove invasive plants. You will need a state-issued pesticide license to apply herbicide on someone else's property, but all projects in wetland or aquatic systems fall under the jurisdiction of the Wetlands Protection Act and therefore require a permit. ***Yes, even hand-pulling that colony of glossy buckthorn plants from your own swampland requires a permit.*** Getting a permit for legal removal is fairly painless if you plan your project carefully.

1. Investigate and understand the required permits and learn how to obtain them. The entity charged with the enforcement of the Wetlands Protection Act varies from state to state. For more information in your state, contact:

   ME: Department of Environmental Protection
   www.state.me.us/dep/blwq/docstand/nrpapage.htm

   NH: Department of Environmental Services
   www.des.state.nh.us/wetlands/

   VT: Department of Environmental Conservation
   www.anr.state.vt.us/dec/waterq/permits/htm/pm_cud.htm

   MA: Consult your local town conservation commission

   RI: Department of Environmental Management
   www.dem.ri.gov/programs/benviron/water/permits/fresh/index.htm

   CT: Consult your local town Inland Wetland and Conservation Commission

2. Consult an individual or organization with experience in this area. Firsthand experience in conducting projects in wetland zones and navigating the permitting process is priceless. Most states have wetland scientist societies whose members are experienced in working in wetlands and navigating the regulations affecting them. A simple Web search will reveal the contact point for these societies. Additionally, most environmental consulting firms and some nonprofit organizations have skills in this area.

3. Develop a well-written and thorough project plan. You are more likely to be successful in obtaining a permit for your project if you submit a project plan along with your permit application. The plan should include the reasons for the project, your objectives in completing the project, how you plan to reach those objectives, and how you will monitor the outcome.

4. Ensure that the herbicides you plan to use are approved for aquatic use. Experts consider most herbicides harmful to water quality or aquatic organisms, but rate some formulations as safe for aquatic use. Do the research and select an approved herbicide, and then closely follow the instructions on the label.

5. If you are unsure—research, study, and most of all, ask for help. Follow the rules. The damage caused to aquatic systems by the use of an inappropriate herbicide or the misapplication of an appropriate herbicide not only damages the environment, but also may reduce public support for safe, well-planned projects.

Section 3
Annual Updates and Log Requirements

The Owner and/or Contact/Responsible Party shall review this Operation and Maintenance Plan once per year for its effectiveness and adjust the plan and deed as necessary.

A log of all preventative and corrective measures for the stormwater system shall be kept on-site and be made available upon request by any public entity with administrative, health environmental or safety authority over the site including NHDES.

Copies of the Stormwater Maintenance report shall be submitted to the City of Portsmouth on an annual basis.

Stormwater Management Report						
Proposed Bank Pad		**1465 Woodbury Avenue – Tax Map 216 Lot 3**				
BMP Description	**Date of Inspection**	**Inspector**	**BMP Installed and Operating Properly?**	**Cleaning / Corrective Action Needed**	**Date of Cleaning / Repair**	**Performed By**
Detention Basin			❑Yes ❑No			
Rain Garden 1			❑Yes ❑No			
Rip Rap Apron			❑Yes ❑No			

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PROPOSED BANK PAD
1465 WOODBURY AVENUE
PORTSMOUTH, NEW HAMPSHIRE

OPEN SPACE EXHIBIT

COMMERCE WAY

MARKET STREET EXTENSION

WOODBURY AVENUE

WOODBURY AVENUE

ARTHUR BRADY DRIVE

PROPOSED OPEN SPACE:

		REQUIRED	PROVIDED
	OPEN SPACE	172,171 SF (20%) (3.95 ACRES)	173,844 SF (3.99 ACRES)
	TOTAL DEVELOPMENT LOT 860,856 SF (19.76 ACRES)		
TOTAL OPEN SPACE AREA		172,171 SF (3.95 ACRES)	173,844SF (20.2%) (3.99 ACRES)

N

0 80' 160'

GRAPHIC SCALE

Tighe&Bond

July 30, 2025
Q-5004-0001_C-DSGN.dwg

Last Save Date: July 11, 2025 3:34 PM By: NWILCOX
Plot Date: Monday, July 14, 2025 Plotted By: Noah Wilcox
Xref File Location: J:\QQ\5004 Quincy & Company, Inc\0001_1465 Woodbury Avenue\Drawings\AutoCAD\Sheet\Q-5004-0001_C-DSGN.dwg Layout Tab: OPEN SPACE EXHIBIT

PROPOSED BANK PAD
1465 WOODBURY AVENUE
PORTSMOUTH, NEW HAMPSHIRE

COMMUNITY SPACE EXHIBIT

COMMERCE WAY

WOODBURY AVENUE

ARTHUR BRADY DRIVE

MARKET STREET EXTENSION

WOODBURY AVENUE

POTENTIAL COMMUNITY SPACE

An area of natural, semi-natural, or planted space set aside for human enjoyment and recreation or for the protection of wildlife or natural habitats. A **park** may consist of grassy areas, trees and other natural or planted landscape features, and may also contain walking **path**s and trails, monuments, fountains, playground equipment, benches, picnic tables and similar amenities.

Permitted Districts: All Districts

PROPOSED COMMUNITY SPACE:

		REQUIRED	PROVIDED
	POTENTIAL COMMUNITY SPACE	86,085 SF (10%) (1.98 ACRES)	87,737 SF (2.01 ACRES)
	TOTAL DEVELOPMENT LOT 860,856 SF (19.76 ACRES)		
TOTAL COMMUNITY SPACE AREA		86,085 SF (1.98 ACRES)	87,737 SF (10.2%) (2.01 ACRES)

N

0 80' 160'

GRAPHIC SCALE

Tighe&Bond

July 30, 2025
Q-5004-0001_C-DSGN.dwg

Last Save Date: July 11, 2025 3:34 PM By: NWILCOX
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OUTDOOR PICNIC AREA

WALKING PATH WITH BENCH SEATING

WALKING PATH WITH CENTRALIZED SEATING

OUTDOOR PICNIC AREA

BISBANO

LEGEND

- NEW PLANTING BY CITIZENS
- NEW PLANTING AS PART OF MASTER PLAN
- EXISTING PLANTING TO REMAIN

BISBANO

BISBANO + ASSOCIATES, INC.

13 June 2025

Portsmouth Planning & Sustainability
1 Junkins Avenue, 3rd Floor
Portsmouth, NH 03801

Re: Citizens Bank New Development
1465 Woodbury Avenue
Portsmouth, NH 03801

Green Building Statement

Site & Landscaping Design:

- In its current state, the project location is a vacant parcel comprised primarily of all pervious surfaces. The area is surrounded by the plaza's main drive aisle along the east, one of the plaza's main entrances along the north, and Woodbury Avenue along the west. At the northern corner of the site there is a detention pond that will be modified but not relocated as part of the proposed design. The proposed design includes (2) entrances and exits into the proposed site with ample vegetated buffer zones between the main plaza drive aisle to the east and the ATM drive-thru lane along with street trees along Woodbury Avenue. Site equipment such as the dumpster and the pad mounted transformer will be discreetly hidden by decorative fencing and tall screening arborvitaes, respectively.

Building Design:

- Exterior Wall Systems:
    - The exterior wall systems for this building have been designed utilizing the 2018 IECC and will meet or exceed the requirements included in this document for energy efficiency. The wood framed structure will maintain a combination of wood bearing walls with elements of steel construction at the main entrance portal. Cavities will

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be filled with batt insulation and will maintain continuous rigid insulation throughout. The finish systems include a mix of fiber cement panels and EIFS used at select locations. The fiber cement panels function as a form of rainscreen allowing moisture to pass through and collect at the landscaped beds along the base of the building.

- Window & Fenestration Systems:
    - All window and fenestration systems will meet or exceed the requirements set forth in the 2018 IECC. The standards for u-values, shading coefficients, solar heat gain coefficients, insulative requirements , and thermal transfer requirements will meet or exceed the requirements noted in the 2018 IECC. The selected storefront system maintains a thermal break application to mitigate and prevent thermal transfer.

- Roofing Systems:
    - The roofing system will provide a light colored EPDM to reduce amount of reflected heat. The roofing system will provide a mix of tapered rigid insulation and either spray foam insulation or batts included between the structure below the roof deck. The insulation values of the selected system will meet or exceed the requirements set forth in the 2018 IECC.

- HVAC Systems:
    - The building will be heated via gas-fired RTUs and an electric split system to maintain year-round comfort for customers utilizing the ATM vestibule after branch hours. At the interior, VAV boxes with electric reheats will be provided and connected to the Citizens main BMS interface for monitoring.

- Plumbing Systems:
    - Plumbing systems and fixtures specified for this project will utilize low flow flushometer applications and automatic faucets for flow control. Hot water heaters will be energy star rated.

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- Lighting Systems:
  - All lighting throughout the project will utilize energy efficient LED fixtures requiring a low power supply. Fixtures throughout the interior of the branch will be installed on an occupancy sensor for areas that do not pose a security concern to either branch colleagues or customers. Exterior lighting will similarly follow low power supply LED specification. Lighting and illuminated signage will be tied into the Citizens main BMS interface for monitoring and for setup of the timeclock for signage and site illumination.

- Appliances:
  - All appliances specified for this location will be Energy Star rated.

Matthew C. Silva, NCARB, AIA

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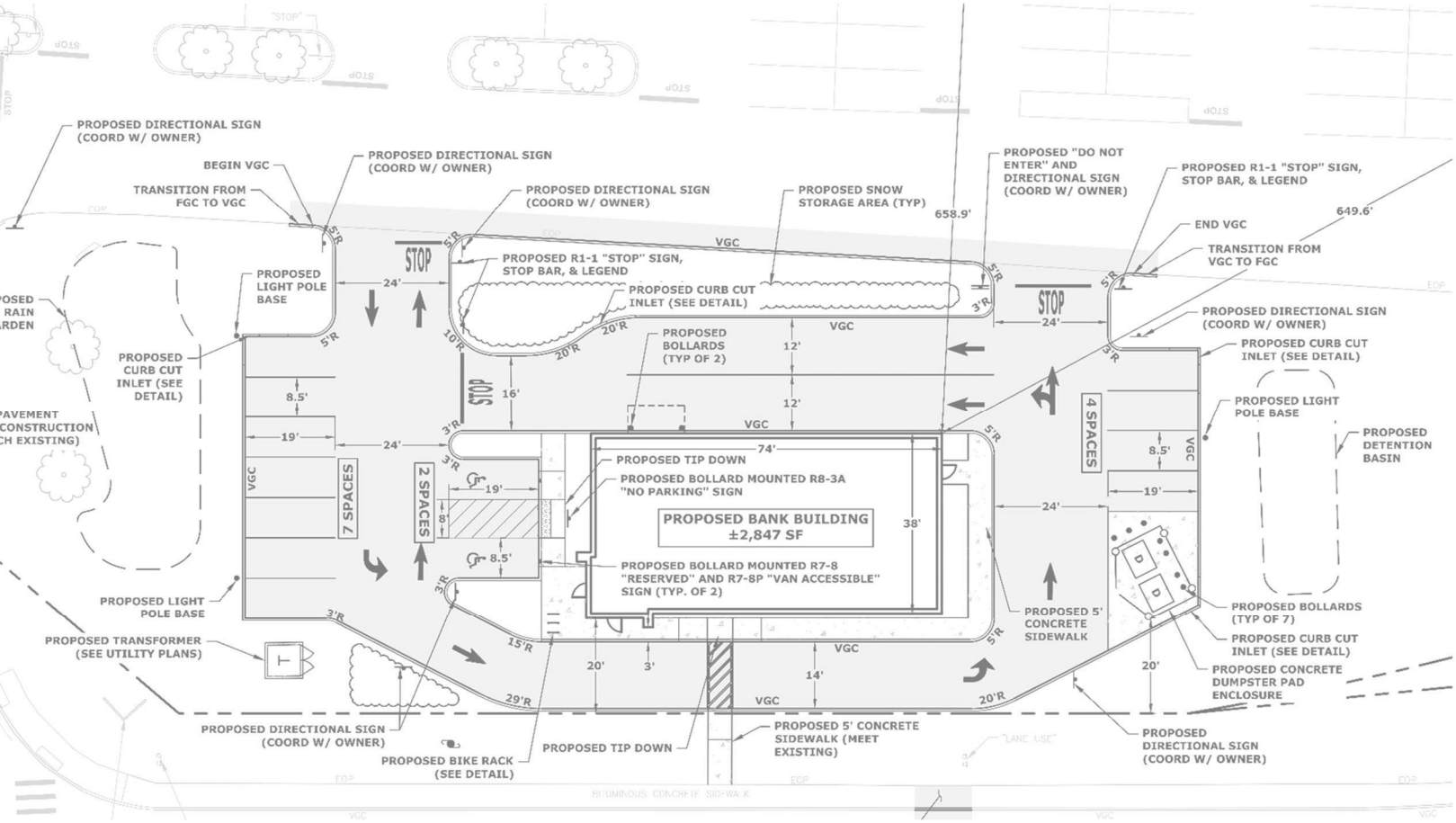
www.bisbano.com



1465 Woodbury Avenue Proposed Bank Pad
Portsmouth, NH

TRAFFIC IMPACT STUDY

Bromley-Portsmouth, LLC & RCQ-Portsmouth, LLC c/o Quincy & Company, Inc.

June 25, 2024

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Table of Contents

Technical Appendices

Section 1
Study Overview

This Traffic Impact Study (TIS) evaluates the potential traffic impact of the proposed bank located at 1465 Woodbury Avenue within the Portsmouth Plaza, in the City of Portsmouth, New Hampshire. The Portsmouth Plaza is an approximate 191,000 square foot (SF) retail plaza containing a supermarket and a mix of large and small retailers, along with restaurant tenants. The proposed bank will be constructed along the Woodbury Avenue frontage, located southeast of the Woodbury Avenue at Arthur F Brady Drive/ Portsmouth Plaza intersection on a currently undeveloped portion of the property. Figure 1 shows the Site location relative to the surrounding roadway network.

The project proposes to construct a 2,847+/- square foot (SF) bank with drive-through. Parking will be provided on site with 13 parking spaces. Site access will be provided via two driveways that are each accessible via the existing perimeter plaza driveway. The proposed northeastern site driveway will be full access; the proposed southeastern driveway will be exit only. The project is expected to be completed in 2027.

Based on the analyses conducted, it is the professional opinion of Tighe & Bond that the additional traffic expected to be generated by the proposed bank is not expected to have a significant impact on traffic operations within the study area.

Section 2
Existing Conditions

The proposed bank site is located along the Woodbury Avenue frontage of the Portsmouth Plaza parcel. The existing shopping plaza is accessible via two signalized intersections at Woodbury Avenue at Arthur F Brady Drive and on Market Street at Woodbury Avenue. Secondary access to the shopping plaza is provided via an unsignalized intersection on Commerce Way to the north. The following sections provide details on the adjacent roadways within the study area.

2.1 Roadways

2.1.1 Woodbury Avenue

Woodbury Avenue is classified as an urban minor arterial from Market Street to Gosling Road and is maintained by the City of Portsmouth. South of the Market Street intersection, Woodbury Road is classified as an urban major collector. The roadway is located east of the site location and primarily runs north-south in the study area. Woodbury Avenue runs from the Spaulding Turnpike interchange in Newington to the north and terminates at an intersection with Bartlett Street in the south. Woodbury Avenue and Market Street form a continuous corridor providing access to a primary commercial corridor between an interchange of Market Street with I-95 to the east and the interchange of Woodbury Avenue with Spaulding Turnpike to the north.

Within the study area, northbound and southbound traffic are divided by an approximately 10-foot wide raised concrete median. Woodbury Avenue typically provides two travel lanes in each direction with two- to four-foot wide marked shoulders, widening at intersections to provide additional turning lanes. An approximately five- to seven-foot sidewalk is provided along both sides of Woodbury Avenue throughout the entire study area. Woodbury Avenue has a posted speed limit of 30 mph in both directions in the vicinity of the Site.

2.1.2 Arthur F Brady Drive

Arthur F Brady Drive is classified as local roadway and is maintained by the City of Portsmouth. The roadway runs east-west, providing access to and from US Route 4 Northbound (Spaulding Turnpike) at the roadway's western terminus and access to Woodbury Avenue to the east. The roadway generally provides one 15-foot travel lane with a one-to two-foot shoulder in each direction. The eastbound and westbound travel lanes split as they approach US Route 4, and the eastbound travel lane opens to provide a dedicated right turn at the intersection with Woodbury Avenue. An approximately six-foot wide sidewalk is provided on the north side of the roadway between the Woodbury Avenue intersection to the Home Depot driveway.

2.2 Study Area Intersections

2.2.1 Woodbury Avenue at Arthur F Brady Drive

Woodbury Avenue intersects Arthur F Brady Drive and the Portsmouth Plaza driveway from the north and south to form a four-way signalized intersection. Woodbury Avenue forms the north and south legs, Arthur F Brady Drive forms the west leg, and the

Portsmouth Plaza driveway forms the east leg. The northbound and southbound approaches provide a dedicated left turn lane, through lane, and shared through and right turn lane. The eastbound and westbound approaches provide a shared through and left turn lane and dedicated right turn lane. The north, south, and east legs are divided by a raised median. Four-foot shoulders are provided on the Woodbury Avenue northbound and southbound approaches; narrow 1 to 2-foot shoulders are provided on the eastbound and westbound approaches. Protected only left turn phasing is provided on the Woodbury Avenue northbound and southbound approaches with a right turn overlap provided on both the eastbound and westbound approaches. The Arthur F Brady eastbound approach and Portsmouth Plaza driveway westbound approaches operate under split phasing.

Sidewalks are provided at all four intersection corners with marked crosswalks provided across all intersection legs. An exclusive pedestrian phase is provided for the intersection.

2.2.2 Woodbury Avenue at Market Street/ Market Basket Driveway

Woodbury Avenue becomes Market Street at its intersection with the Market Basket driveway, while Woodbury Avenue turns to the south, all meeting to form a four-way signalized intersection. Woodbury Avenue forms the north and west legs, Market Street forms the south leg, and the Market Basket driveway forms the east leg. The southbound Woodbury Avenue approach provides a dedicated right turn lane, two through lanes, and a dedicated left turn lane. The eastbound Woodbury Avenue approach provides a shared right turn and through lane and two dedicated left turn lanes. The northbound Market Street approach provides a shared through and right turn lane, a through lane, and a dedicated left turn lane. The westbound Portsmouth Plaza/ Market Basket Driveway approach provides a shared right and through lane and a dedicated left turn lane. The north, south, and west legs are divided by a raised concrete median while the east leg is divided by a raised median with landscaping. Marked edge lines are provided on all approaches with a 1-to-2-foot offset from the curb. Protected only left turn phasing is provided on the Market Street northbound and Woodbury Avenue southbound approaches. A right turn overlap is provided on the Woodbury Avenue southbound approach. The Woodbury Avenue eastbound and Market Basket driveway westbound approaches operate under split phasing.

Sidewalks are provided at all four intersection corners with marked crosswalks provided across all intersection legs. An exclusive pedestrian phase is provided for the intersection.

2.3 Traffic Volumes

Turning movement counts (TMCs) were collected at the study area intersections on Thursday, May 29, 2025, during the weekday morning (7:00 AM to 9:00 AM) and weekday afternoon peak periods (4:00 PM to 6:00 PM) and on Saturday, May 31, 2025, during the Saturday midday peak period (11:00 AM to 2:00 PM).

The weekday morning, weekday afternoon, and Saturday midday TMCs were seasonally adjusted to a peak month per NHDOT guidelines based on 2024 Seasonal Adjustment Data available from NHDOT. A seasonal adjustment factor of 1.02 was applied to the traffic volumes based on Group 4 Averages: Urban Highways for the month of May. The adjusted 2025 existing traffic volumes for the weekday morning, weekday afternoon,

and Saturday midday peak hours are shown in Figure 2. The raw TMC data is provided in Appendix A. The NHDOT seasonal adjustment factors are enclosed in Appendix B.

2.4 Capacity and Queue Analyses - Existing Condition

Capacity and queue analyses were performed for the study intersections for the 2025 Existing Conditions during the weekday morning, weekday afternoon, and Saturday midday peak hours. Analyses were conducted using Trafficware Synchro Studio 11 software, which conducts the analysis based on *Highway Capacity Manual (HCM)* methodology. Consistent with NHDOT guidelines, analyses for signalized intersections were conducted using methods of the 2000 HCM, while analysis for unsignalized intersections utilized the HCM 6th Edition methodology. The analysis results are categorized in terms of Level of Service (LOS), which describes the qualitative intersection operational conditions based on the calculated average delay per vehicle. A summary of the HCM capacity analysis methodology and a detailed definition of LOS is provided in Appendix D. The queue analysis results are summarized based upon the length of vehicle queueing on an intersection approach. For unsignalized intersections, queues are quantified for 95th percentile (design queues). For signalized intersections, queues are quantified by 95th percentile (design) and 50th percentile (average) queues. Tables 1 and 2 in Section 7 summarize the capacity and queue analyses results, respectively. Capacity analysis worksheets with full inputs, settings, and results are provided in Appendix E.

As shown in Table 1, all of the overall intersections and a majority of the individual intersection approaches operate at acceptable at LOS D or better during the peak hours with the following exceptions:

- **Woodbury Avenue at Arthur F Brady Drive/ Portsmouth Plaza Driveway**
    - The Woodbury Avenue northbound left turn movement onto Arthur F Brady Drive operates at LOS F during the weekday afternoon and Saturday midday peak hour.
    - The Arthur F Brady Drive eastbound shared through and left turn movement onto Woodbury Avenue operates at LOS E during the weekday afternoon peak hour and LOS F during the Saturday midday peak hour.
- **Woodbury Avenue at Market Street/ Market Basket Driveway**
    - The Market Street northbound left turn movement operates at LOS E during the weekday afternoon peak hour.
    - The Woodbury Avenue southbound left turn movement operates at LOS E during the weekday afternoon peak hour.

A review of the queueing results in Table 2 shows design queues on all study intersection movements are accommodated within the available storage within turn bays and between intersections during each peak period with the following exceptions:

- **Woodbury Avenue at Arthur F Brady Drive/ Portsmouth Plaza Driveway**
    - The Woodbury Avenue northbound left turn exceeds the available storage by approximately six vehicle lengths during the weekday afternoon peak hour and four vehicle lengths during the Saturday midday peak hour.

- The Woodbury Avenue southbound shared through and right turn exceeds the available storage by approximately four vehicle lengths during the Saturday midday peak hour.
- The Portsmouth Plaza westbound shared through and left turn exceeds the available storage by approximately four vehicle lengths during the weekday afternoon peak hour and seven vehicle lengths during the Saturday midday peak hour.

- **Woodbury Avenue at Market Street/ Market Basket Driveway**
  - The Portsmouth Plaza/ Market Basket Driveway westbound left turn exceeds the available storage by approximately one vehicle length during the weekday morning peak hour, seven vehicle lengths during the weekday afternoon peak hour, and six vehicle lengths during the Saturday midday peak hour.
  - The Portsmouth Plaza/ Market Basket Driveway westbound shared through and right turn exceeds the available storage by approximately two vehicle lengths during the weekday afternoon peak hour and three vehicle lengths during the Saturday midday peak hour.

2.5 Collision History

Vehicle collision data for the study intersections was requested from the Portsmouth Police Department. However, as of this time, vehicle accident reports were not able to be provided due to reported staffing shortages.

2.6 Alternative Travel Modes

The study area is in built up commercial area in the City of Portsmouth where many multimodal travel options are available. The following summarizes the details of various alternative travel modes supported within the study area.

Pedestrian facilities are generally present throughout the study area. Existing sidewalks are present on both sides of Woodbury Avenue within the study area. Marked crosswalks are provided across all legs and exclusive pedestrian phasing with countdown pedestrian signal heads are provided at both the Woodbury Avenue at Arthur F Brady Drive/ Portsmouth Plaza driveway and Woodbury Avenue at Market Street/ Market Basket intersections. Limited sidewalks are provided on either side of the Market Basket driveway with no internal sidewalks provided within the existing Portsmouth Plaza.

The Cooperative Alliance for Seacoast Transportation (COAST) provides transit service within the study area. Bus Route 43 is the primary bus route in the study area which runs between Hanover Station to the south and Fox Run Mall to the north. Bus stops are located along Woodbury Avenue and Commerce Way in the vicinity of the Site. The route operates from 6:30 AM to 8:57 PM Monday through Saturday. The Route 43 map and schedule are included in Appendix H.

Section 3
No-Build Conditions

The No-Build Condition represents the projection of traffic volumes and operating conditions without the anticipated additional site generated traffic. Consistent with NHDOT guidelines, the study area is analyzed for an Opening Year (2027) and Design Year (2037). This section describes the growth and development considerations included in the 2027 and 2037 No-Build traffic volumes.

3.1 Traffic Growth

To develop the traffic volumes for the 2027 and 2037 No-Build Conditions, the 2025 Existing traffic volumes were grown by one percent per year to represent the general growth of traffic on the study area roadways. This growth rate is consistent with the average growth rate in NHDOT Region E - Southeast, the region in which Portsmouth is located and previously approved studies in the area. Background NHDOT growth data is included in Appendix B.

NHDOT, the City of Portsmouth, and the Pease Development Authority were contacted about other approved developments in the area that may add new traffic to the study area prior to 2027. The following developments were identified:

- **100 Durgin Lane Multi-Family Development:** The project proposes to construct a 360-unit residential development. The project has been approved by the City and is anticipated to be occupied in 2027. Estimated site traffic volumes outlined in the project's Traffic Impact Study are included in the development of the 2027 and 2037 No-Build traffic volumes.

It is assumed that other smaller developments or small vacancies in existing developments are also captured by the background traffic growth rate. The 2027 and 2037 No-Build traffic volumes for the weekday morning, weekday afternoon, and Saturday midday peak hours are shown in Figures 3 and 4, respectively.

3.2 Capacity and Queue Analyses – No-Build Conditions

Capacity and queue analyses were conducted for the 2027 and 2037 No-Build Conditions traffic volumes for all peak periods using the methodology described in Section 2.4. Tables 1 and 2 in Section 7 summarize the capacity and queue results, respectively. Capacity analysis worksheets with full inputs, settings, and results are provided in Appendix E.

The increase in expected future traffic based on the one percent per year compounded growth rate and background development traffic volumes that were added to the existing 2025 traffic volumes resulted in some degradations in operations when compared to existing conditions for the 2027 No-Build Condition. The following intersection showed degradation in level of service between the existing conditions and 2027 No Build Condition:

- **Woodbury Avenue at Arthur F Brady Drive/ Portsmouth Plaza Driveway**
    - The overall intersection degrades from LOS D to LOS E during the Saturday midday peak hour in 2027.
    - The Portsmouth Plaza Driveway westbound shared through and left turn movement degrades from LOS D to LOS E during the Saturday midday peak hour in 2027.

The 2037 No-Build Condition resulted in additional degradation of level of service and increases in delay when compared to the 2027 No-Build Condition due to the addition of ten years of compounded annual growth. The following intersections showed additional degradation of operations from the 2027 to 2037 No-Build Condition:

- **Woodbury Avenue at Arthur F Brady Drive/ Portsmouth Plaza Driveway**
    - The Arthur F Brady Drive eastbound shared through and left turn movement degrades from LOS E to LOS F during the weekday afternoon peak hour in 2037.
- **Woodbury Avenue at Market Street/ Market Basket Driveway**
    - The Market Street northbound left turn movement degrades from LOS E to LOS F during the weekday afternoon peak hour in 2037.

Design queues that were accommodated in the existing conditions continue to be accommodated within available storage in the 2027 No-Build condition or increased by less than two vehicle lengths.

While some intersections experience increases in design queue length of greater than two vehicle lengths in 2037 due to the compounded annual growth rate and approved developments in the area, design queues in 2037 are predicted to remain within available storage as shown in Table 2 with the following exceptions:

- **Woodbury Avenue at Arthur F Brady Drive/ Portsmouth Plaza Driveway**
    - The shared Woodbury Avenue northbound through and right turn movement design queue is estimated to is predicted to increase by approximately three vehicle lengths in the weekday afternoon peak hour and four vehicle lengths during the Saturday midday peak hour in 2037.
    - The shared Woodbury Avenue southbound through and right turn movement is predicted to increase by five vehicle lengths during the weekday afternoon peak hour and six vehicle lengths during the Saturday midday peak hour in 2037.
- **Woodbury Avenue at Market Street/ Market Basket Driveway**
    - The shared Market Street northbound through and right turn movement design queue is estimated to is predicted to increase by approximately five vehicle lengths during both the weekday afternoon and Saturday midday peak hours in 2037.
    - The Woodbury Avenue southbound through movement design queue is predicted to increase by four vehicle lengths during both the weekday afternoon and Saturday midday peak hours in 2037.

Section 4
Proposed Conditions

The project proposes to construct a 2,847+/- SF bank with drive-through on a currently undeveloped portion of the existing Portsmouth Plaza property. A total of 13 parking spaces, including two accessible spaces, are proposed on site. The proposed development is expected to be complete and occupied in 2027. The Site Plan is presented in Appendix F.

4.1 Site Access

Primary access to Portsmouth Plaza is provided via two signalized intersections along Woodbury Avenue: one at Arthur F Brady Drive/ Portsmouth Plaza driveway, and a second at Market Street/ Market Basket driveway. Direct access to the site will be provided via two driveways off the perimeter driveway: one full access driveway located approximately 200 feet southeast of the Portsmouth Plaza driveway; one exit-only driveway located 125 feet southeast of the full access driveway. The Site will provide counterclockwise circulation with a two-lane drive-through on the northeastern side of the building. Pedestrian access will be provided via a proposed sidewalk and crosswalk connecting the building entrance to the existing sidewalk that runs along the northeastern side of Woodbury Avenue.

4.2 Trip Generation

Trips expected to be generated by the proposed development were estimated using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition, 2021. Drive-in bank (LUC-912) was used to estimate vehicle trips based on the proposed 2,847 SF bank with drive-through.

Based on the location of the site in relation to a major roadway and the nature of the proposed bank, it is reasonable to assume the site may generate pass-by trips. Pass-by trips were estimated to account for the proportion of vehicles already on the adjacent roadway (Market Street) who will access the bank. Pass-by trips are not new trips added to the roadway network; rather these trips will divert from their route, access the site, and re-enter the network to continue on their route. The average pass-by rate as established by data maintained by ITE and included in the Trip Generation Manual Appendices, 11th Edition, 2021 for LUC 912 is 29% during the weekday morning peak hour, 35% during the weekday afternoon peak hour, and 38% during the Saturday midday peak hour. ITE Pass-By Rate data is included in Appendix G.

Based on the ITE data and the application of the pass-by rates, the proposed bank is estimated to generate 18 new trips (11 entering, 7 exiting) during the weekday morning peak hour, 38 new trips (19 entering, 19 exiting) during the weekday afternoon peak hour, and 47 new trips (24 entering, 23 exiting) during the Saturday midday peak hour. Table 3 provides a detailed summary of the trip generation.

4.3 Arrival and Departure Distribution

The distribution of the proposed site-generated traffic entering and exiting the Site was applied to the roadway network based on existing traffic patterns and anticipated travel patterns to and from the site. The following arrival/departure distributions are anticipated:

- 20% to/ from the South to Portsmouth Center via Market Street
- 20% to/ from the South via US Route 1 Bypass
- 10% to/ from the North via Woodbury Avenue
- 10% to/ from the South via Woodbury Avenue
- 10% to/ from the South via Maplewood Avenue
- 10% to/ from the North via US Route 4 (Spaulding Turnpike)
- 10% to/ from the South to I-95 South
- 5% to/ from the North to I-95 North
- 5% to/ from the South to Route 33

Based on the regional distribution and surrounding roadway network, it is estimated that that 80% of site traffic will enter and exit the site via the Market Basket driveway and the remaining 20% will utilize the plaza driveway opposite Arthur F Brady Drive.

Figure 5 presents the arrival and departure distributions of the traffic through the study area by intersection movement. Figure 6 shows the proposed new site generated traffic distributed to the study area roadways for the weekday morning, weekday afternoon, and Saturday midday peak periods. The pass-by trips for the weekday morning, weekday afternoon, and Saturday midday peak periods are shown in Figure 7.

4.4 Multi-Modal Accommodations

Internal sidewalks are proposed adjacent to all parking areas and buildings on site. A proposed crosswalk and sidewalk section will connect to the existing sidewalk on the north side of Woodbury Avenue.

Section 5
Build Conditions

The anticipated site generated traffic volumes associated with the proposed development were added to the 2027 and 2037 No-Build Conditions traffic volumes to develop the 2027 and 2037 Build Conditions traffic volumes, which are presented in Figures 8 and 9, respectively.

5.1 Capacity and Queue Analyses - Build Condition

Capacity and queue analyses were conducted for the 2027 and 2037 Build Conditions for the peak hours using the methodology described in Section 2.4. Tables 1 and 2 in Section 7 summarize the capacity and queue results, respectively. Capacity analysis worksheets with full inputs, settings, and results are provided in Appendix D.

The majority of the individual intersection approaches continue to operate at acceptable LOS D or better during the peak hours in the 2027 and 2037 Build Conditions. All study area intersections that were identified in Section 2.4 and 3.2 to operate at LOS E or LOS F in the 2027 No-Build Conditions continue to operate at the same LOS under 2027 Build Conditions. The study area intersections identified to operate at LOS E or LOS F in the 2037 No-Build Conditions continue to operate at the same LOS under the 2037 Build Conditions, with the exception of the following:

- **Woodbury Avenue at Market Street/ Market Basket Driveway**
    - The Woodbury Avenue eastbound shared through and right turn movement degrades from LOS D to LOS E during the weekday afternoon peak hour in 2037, representing an increase in delay of less than one second.

Design queues on all intersection approaches in the Build Conditions increased by less than two vehicle lengths. All intersection approaches that were identified in Section 3.2 to be accommodated within the available storage in the 2027 and 2037 No-Build Conditions continue to be accommodated by the available storage in the 2027 and 2037 Build Conditions.

Section 6
Conclusions & Recommendations

1. The project proposes to construct a 2,847+/- SF bank with drive-through. Approximately 13 parking spaces are proposed. The development is expected to be complete and occupied in 2027.

2. Access to the site will be provided via two driveways that connect to the existing Portsmouth Plaza perimeter driveway: the northeastern driveway will be full access while the second driveway located 200 feet to the southeast will be exit only. Portsmouth Plaza is accessible via the Woodbury Avenue at Arthur F Brady Drive/ Portsmouth Plaza driveway and the Woodbury Avenue at Market Street/ Market Basket driveway signalized intersections.

3. The proposed bank is estimated to generate 18 new trips (11 entering, 7 exiting) during the weekday morning peak hour, 38 new trips (19 entering, 19 exiting) during the weekday afternoon peak hour, and 47 new trips (24 entering, 23 exiting) during the Saturday midday peak hour. The trip generation estimate includes a pass-by credit for the proposed bank use based on data available from ITE.

4. The project proposes sidewalks on-site to/ from parking spaces to the building entrances as well as a new connection to the existing sidewalk along Woodbury Avenue to provide safe access to the Site.

5. Consistent with NHDOT guidelines, existing traffic volumes have been seasonally adjusted to the peak month condition.

6. The capacity analyses show that the study area intersections will generally continue to operate at the same LOS under the Build Conditions as compared to the No-Build Conditions for both the 2027 opening year and 2037 design year, except for the intersection of Woodbury Avenue at Market Street/ Market Basket Driveway which experiences a degradation in LOS from D to E on the eastbound shared through and right turn movement during the weekday afternoon peak hour in 2037, representing an increase in delay of less than one second. A review of design queues indicates minor increases of two vehicles of less in the 2027 and 2037 Build Conditions compared to the corresponding No Build Conditions.

7. Based on the results of the foregoing analysis, it is the professional opinion of Tighe & Bond that the addition of site-generated traffic is expected to have a negligible effect on traffic operations within the study area as compared to the existing condition.

Section 7
Tables

TABLE 1
Intersection Operation Summary - Capacity

	Lane Use	2025 Existing			2027 No Build			2027 Build			2037 No Build			2037 Build		
		Weekday Morning Peak Hour														
		LOS	**Delay**	**V/C**	**LOS**	**Delay**	**V/C**	**LOS**	**Delay**	**V/C**	**LOS**	**Delay**	**V/C**	**LOS**	**Delay**	**V/C**
Traffic Signal - Woodbury Avenue at Arthur F Brady Drive / Portsmouth Plaza Driveway																
Overall		**C**	**20.8**	**0.62**	**C**	**20.5**	**0.65**	**C**	**20.6**	**0.65**	**C**	**21.0**	**0.67**	**C**	**21.9**	**0.69**
Woodbury Avenue	NBL	C	22.7	0.46	C	22.9	0.47	C	22.9	0.47	C	23.9	0.52	C	24.6	0.53
	NBTR	B	17.2	0.38	B	16.0	0.36	B	16.2	0.36	B	16.0	0.38	B	16.9	0.39
	SBL	C	24.5	0.17	C	24.8	0.17	C	24.7	0.20	C	25.5	0.20	C	26.2	0.22
	SBTR	C	21.1	0.62	C	20.4	0.65	C	20.4	0.65	C	20.5	0.67	C	21.3	0.69
Arthur F Brady Drive	EBLT	C	25.2	0.41	C	25.6	0.41	C	25.6	0.41	C	26.6	0.46	C	27.3	0.47
	EBR	B	15.7	0.07	B	15.8	0.07	B	15.8	0.07	B	16.6	0.08	B	17.2	0.08
Portsmouth Plaza Driveway	WBLT	C	26.0	0.23	C	27.8	0.25	C	27.7	0.26	C	28.5	0.28	C	27.8	0.22
	WBR	B	15.4	0.03	B	16.8	0.03	B	16.6	0.03	B	17.3	0.03	B	16.8	0.03
Traffic Signal - Woodbury Avenue at Market Street / Market Basket Driveway																
Overall		**C**	**23.2**	**0.55**	**C**	**22.9**	**0.56**	**C**	**23.3**	**0.56**	**C**	**23.7**	**0.59**	**C**	**24.1**	**0.60**
Market Street	NBL	C	30.8	0.55	C	31.3	0.56	C	31.4	0.56	D	31.9	0.59	D	32.3	0.60
	NBTR	B	16.8	0.40	B	16.7	0.40	B	17.0	0.41	B	17.0	0.44	B	17.4	0.44
Woodbury Avenue	SBL	D	38.4	0.29	D	38.7	0.26	D	38.9	0.26	D	39.8	0.33	D	40.2	0.33
	SBT	C	23.8	0.38	C	23.7	0.42	C	24.1	0.42	C	24.6	0.45	C	24.9	0.45
	SBR	B	12.6	0.12	B	12.5	0.15	B	12.6	0.15	B	13.0	0.17	B	12.9	0.17
	EBL	C	32.2	0.26	C	32.6	0.29	C	32.5	0.28	C	33.5	0.31	C	33.4	0.30
	EBTR	C	32.2	0.25	C	32.5	0.26	C	32.8	0.36	C	33.6	0.33	D	33.9	0.43
Market Basket Driveway	WBL	D	33.8	0.44	D	34.3	0.40	D	34.4	0.42	D	35.2	0.44	D	35.6	0.46
	WBTR	C	33.2	0.22	C	33.7	0.20	C	33.8	0.23	D	34.5	0.21	D	34.9	0.25

Legend
LOS - Level of Service
Delay - average delay per vehicle in seconds
V/C - volume to capacity ratio

TABLE 1 (CONTINUED)
Intersection Operation Summary - Capacity

	Lane Use	Weekday Afternoon Peak Hour														
		2025 Existing			2027 No Build			2027 Build			2037 No Build			2037 Build		
		LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
Traffic Signal - Woodbury Avenue at Arthur F Brady Drive / Portsmouth Plaza Driveway																
Overall		**D**	**41.2**	**1.08**	**D**	**42.8**	**1.13**	**D**	**42.9**	**1.13**	**D**	**53.7**	**1.32**	**D**	**53.8**	**1.32**
Woodbury Avenue	NBL	F	36.2	1.08	F	37.0	1.13	F	37.0	1.13	F	39.1	1.32	F	39.0	1.32
	NBTR	C	24.3	0.58	C	24.2	0.60	C	24.7	0.62	C	24.5	0.63	C	25.0	0.64
	SBL	D	34.2	0.41	D	34.9	0.42	D	34.7	0.46	D	36.7	0.47	D	36.4	0.49
	SBTR	C	27.2	0.79	C	26.9	0.80	C	27.0	0.80	C	27.0	0.81	C	27.1	0.81
Arthur F Brady Drive	EBLT	E	37.8	0.87	E	38.5	0.85	E	38.5	0.85	F	41.1	0.99	F	41.0	0.99
	EBR	C	26.2	0.16	C	27.0	0.16	C	27.0	0.16	C	29.2	0.17	C	29.1	0.17
Portsmouth Plaza Driveway	WBLT	D	34.3	0.55	D	35.3	0.54	D	35.2	0.55	D	37.3	0.60	D	37.2	0.61
	WBR	C	24.1	0.07	C	25.0	0.06	C	24.5	0.07	C	26.2	0.07	C	25.7	0.07
Traffic Signal - Woodbury Avenue at Market Street / Market Basket Driveway																
Overall		**C**	**31.9**	**0.82**	**C**	**32.4**	**0.85**	**C**	**33.2**	**0.86**	**D**	**36.3**	**0.98**	**D**	**37.3**	**0.98**
Market Street	NBL	E	41.5	0.82	E	42.3	0.85	E	42.5	0.86	F	44.7	0.98	F	44.9	0.98
	NBTR	C	22.7	0.62	C	22.9	0.64	C	23.3	0.65	C	24.2	0.70	C	24.6	0.71
	SBL	E	47.8	0.48	E	48.4	0.48	E	48.7	0.50	E	50.0	0.55	E	50.3	0.55
Woodbury Avenue	SBT	C	29.7	0.64	C	29.8	0.66	C	30.1	0.66	C	30.8	0.70	C	31.1	0.70
	SBR	B	15.5	0.22	B	15.4	0.24	B	15.7	0.24	B	15.7	0.27	B	16.0	0.27
	EBL	D	41.6	0.54	D	42.2	0.59	D	42.4	0.59	D	43.8	0.65	D	44.1	0.65
	EBTR	D	41.5	0.52	D	42.0	0.54	D	42.6	0.63	D	43.6	0.61	E	44.4	0.71
Market Basket Driveway	WBL	D	39.6	0.71	D	40.2	0.71	D	40.3	0.73	D	41.6	0.76	D	41.6	0.78
	WBTR	D	37.1	0.31	D	37.8	0.30	D	37.8	0.33	D	38.8	0.33	D	38.8	0.36

Legend
LOS - Level of Service
Delay - average delay per vehicle in seconds
V/C - volume to capacity ratio

TABLE 1 (CONTINUED)
Intersection Operation Summary - Capacity

	Lane Use	Saturday Midday Peak Hour														
		2025 Existing			2027 No Build			2027 Build			2037 No Build			2037 Build		
		LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
Traffic Signal - Woodbury Avenue at Arthur F Brady Drive / Portsmouth Plaza Driveway																
Overall		**D**	**54.0**	**1.40**	**E**	**59.6**	**1.52**	**E**	**58.9**	**1.50**	**E**	**73.4**	**1.73**	**E**	**73.6**	**1.73**
Woodbury Avenue	NBL	F	39.1	1.03	F	41.3	1.11	F	41.1	1.11	F	43.0	1.28	F	43.0	1.28
	NBTR	C	26.4	0.66	C	25.7	0.64	C	26.3	0.65	C	26.2	0.67	C	26.5	0.68
	SBL	D	35.9	0.58	D	38.1	0.62	D	37.7	0.65	D	39.7	0.67	D	39.6	0.71
	SBTR	C	27.4	0.82	C	26.8	0.81	C	26.9	0.81	C	27.1	0.84	C	27.0	0.83
Arthur F Brady Drive	EBLT	F	41.1	1.40	F	43.4	1.52	F	43.1	1.50	F	45.1	1.73	F	45.1	1.73
	EBR	C	29.7	0.26	C	32.2	0.28	C	31.9	0.28	D	34.5	0.38	D	34.5	0.38
Portsmouth Plaza Driveway	WBLT	D	37.7	0.74	E	40.0	0.76	E	39.9	0.77	E	42.4	0.88	E	42.5	0.89
	WBR	C	24.6	0.11	C	26.6	0.11	C	26.0	0.11	C	27.8	0.12	C	27.5	0.12
Traffic Signal - Woodbury Avenue at Market Street / Market Basket Driveway																
Overall		**C**	**29.5**	**0.69**	**C**	**29.9**	**0.70**	**C**	**30.9**	**0.72**	**C**	**32.7**	**0.79**	**C**	**33.6**	**0.80**
Market Street	NBL	D	40.1	0.59	D	40.9	0.60	D	41.3	0.61	D	41.7	0.65	D	42.1	0.65
	NBTR	C	23.8	0.69	C	24.0	0.70	C	24.7	0.72	C	25.9	0.79	C	26.4	0.80
Woodbury Avenue	SBL	D	45.3	0.38	D	46.1	0.39	D	46.5	0.39	D	47.0	0.43	D	47.3	0.43
	SBT	C	28.2	0.66	C	28.5	0.68	C	29.0	0.69	C	30.5	0.77	C	30.8	0.77
	SBR	B	14.1	0.24	B	14.2	0.27	B	14.5	0.27	B	15.0	0.29	B	15.3	0.29
	EBL	D	40.2	0.53	D	41.0	0.58	D	41.2	0.56	D	41.9	0.62	D	42.2	0.62
	EBTR	D	40.1	0.51	D	40.8	0.52	D	41.4	0.61	D	41.7	0.58	D	42.4	0.68
Market Basket Driveway	WBL	D	38.9	0.66	D	39.8	0.67	D	39.9	0.70	D	40.2	0.71	D	40.3	0.73
	WBTR	D	37.2	0.34	D	38.0	0.35	D	38.1	0.39	D	38.2	0.37	D	38.2	0.40

Legend
LOS - Level of Service
Delay - average delay per vehicle in seconds
V/C - volume to capacity ratio

TABLE 2
Intersection Operation Summary - Queues (In Feet)

	Lane Use	Available Storage	Weekday Morning Peak Hour									
			2025 Existing		2027 No Build		2027 Build		2037 No Build		2037 Build	
			50th	95th	50th	95th	50th	95th	50th	95th	50th	95th
Traffic Signal - Woodbury Avenue at Arthur F Brady Drive / Portsmouth Plaza Driveway												
Woodbury Avenue	NBL	300	47	107	50	112	50	112	59	138	59	138
	NBTR	625	58	98	61	103	61	103	69	115	69	115
	SBL	250	12	36	12	38	14	42	14	42	16	45
	SBTR	375	85	132	106	160	105	160	118	176	117	175
Arthur F Brady Drive	EBLT	975	31	72	30	76	30	76	35	95	35	95
	EBR	100	0	11	0	12	0	12	0	16	0	16
Portsmouth Plaza Driveway	WBLT	75	12	30	10	33	10	34	11	36	12	37
	WBR	75	0	0	0	0	0	1	0	1	0	2
Traffic Signal - Woodbury Avenue at Market Street / Market Basket Driveway												
Market Street	NBL	300	51	199	51	203	52	204	60	237	62	239
	NBTR	600	66	233	66	240	68	242	77	272	81	274
Woodbury Avenue	SBL	275	2	16	2	16	2	16	2	19	2	19
	SBT	675	63	158	72	176	73	175	82	194	83	193
	SBR	675	0	46	0	50	0	50	0	52	0	52
	EBL	275	17	57	19	61	19	61	21	67	21	67
	EBTR	275	12	82	12	82	20	101	17	96	27	127
Market Basket Driveway	WBL	50	27	80	23	86	25	91	27	93	30	98
	WBTR	50	13	50	11	55	13	60	13	58	16	64

Legend

50th & 95th - 50th and 95th percentile queue lengths in feet

TABLE 2 (CONTINUED)
Intersection Operation Summary - Queues (In Feet)

	Lane Use	Available Storage	Weekday Afternoon Peak Hour									
			2025 Existing		2027 No Build		2027 Build		2037 No Build		2037 Build	
			50th	95th	50th	95th	50th	95th	50th	95th	50th	95th
Traffic Signal - Woodbury Avenue at Arthur F Brady Drive / Portsmouth Plaza Driveway												
Woodbury Avenue	NBL	300	125	458	145	468	144	468	188	519	187	519
	NBTR	625	125	300	140	328	140	330	159	377	159	394
	SBL	250	36	112	39	113	43	124	45	122	50	133
	SBTR	375	173	369	192	406	190	403	218	489	216	484
Arthur F Brady Drive	EBLT	975	62	239	62	251	62	251	73	279	72	279
	EBR	100	0	28	0	36	0	36	0	38	0	38
Portsmouth Plaza Driveway	WBLT	75	54	167	52	180	53	186	62	206	63	211
	WBR	75	0	19	0	22	0	25	0	25	0	26
Traffic Signal - Woodbury Avenue at Market Street / Market Basket Driveway												
Market Street	NBL	300	98	292	102	300	103	300	116	337	118	337
	NBTR	600	165	490	175	526	180	530	207	608	214	613
Woodbury Avenue	SBL	275	5	26	5	26	6	26	6	28	6	28
	SBT	675	171	354	181	383	182	377	210	445	211	440
	SBR	675	0	61	0	63	0	63	0	67	0	67
	EBL	275	48	108	55	119	56	119	62	138	63	138
	EBTR	275	42	145	45	151	56	184	53	176	65	210
Market Basket Driveway	WBL	50	107	237	107	248	114	272	119	287	126	309
	WBTR	50	45	110	44	114	50	126	49	124	56	136

Legend

50th & 95th - 50th and 95th percentile queue lengths in feet

TABLE 2 (CONTINUED)
Intersection Operation Summary - Queues (In Feet)

	Lane Use	Available Storage	Saturday Midday Peak Hour									
			2025 Existing		2027 No Build		2027 Build		2037 No Build		2037 Build	
			50th	95th	50th	95th	50th	95th	50th	95th	50th	95th
Traffic Signal - Woodbury Avenue at Arthur F Brady Drive / Portsmouth Plaza Driveway												
Woodbury Avenue	NBL	300	117	400	138	409	137	409	176	455	176	455
	NBTR	625	158	386	171	424	171	416	196	495	196	488
	SBL	250	67	171	74	174	80	189	84	190	91	205
	SBTR	375	216	483	240	550	237	542	276	638	273	631
Arthur F Brady Drive	EBLT	975	134	396	154	406	152	406	184	443	184	443
	EBR	100	9	52	12	54	12	54	21	74	21	74
Portsmouth Plaza Driveway	WBLT	75	80	257	84	267	84	272	98	303	99	308
	WBR	75	0	26	0	30	0	31	0	32	0	32
Traffic Signal - Woodbury Avenue at Market Street / Market Basket Driveway												
Market Street	NBL	300	58	160	59	164	60	164	67	185	68	185
	NBTR	600	172	550	182	578	187	583	217	668	224	673
Woodbury Avenue	SBL	275	10	38	10	38	10	38	11	41	11	41
	SBT	675	183	411	196	443	197	436	230	511	231	504
	SBR	675	0	63	0	65	0	65	0	69	0	69
	EBL	275	49	110	54	118	54	118	61	138	61	138
	EBTR	275	44	141	46	146	57	180	53	170	65	204
Market Basket Driveway	WBL	50	90	203	92	205	100	222	104	239	112	263
	WBTR	50	46	118	47	120	55	136	53	131	60	146

Legend

50th & 95th - 50th and 95th percentile queue lengths in feet

TABLE 3
Site-Generated Traffic Summary

Proposed - 2,847 SF Drive-Thru Bank **Peak Hour Period**	**Enter**	**Exit**	**Total**
Weekday Morning	16	12	28
Weekday Afternoon	30	30	60
Saturday Midday	38	37	75

Pass-By Trip Credit[1] **Peak Hour Period (Rate)**	**Enter**	**Exit**	**Total**
Weekday Morning *(29%)*	5	5	10
Weekday Afternoon *(35%)*	11	11	22
Saturday Midday *(38%)*	14	14	28

Net Vehicular Trips (Total minus Pass-by Trips) **Peak Hour Period**	**Enter**	**Exit**	**Total**
Weekday Morning	**11**	**7**	**18**
Weekday Afternoon	**19**	**19**	**38**
Saturday Midday	**24**	**23**	**47**

Source: Institute of Transportation Engineers, Trip Generation, 11th Edition, 2021
Land Use - 912 [Drive-in Bank]
[1]Vehicle Pass-By Rates and Rate Tables by Land Use, LUC 912 (Drive-In Bank)

Section 8
Figures

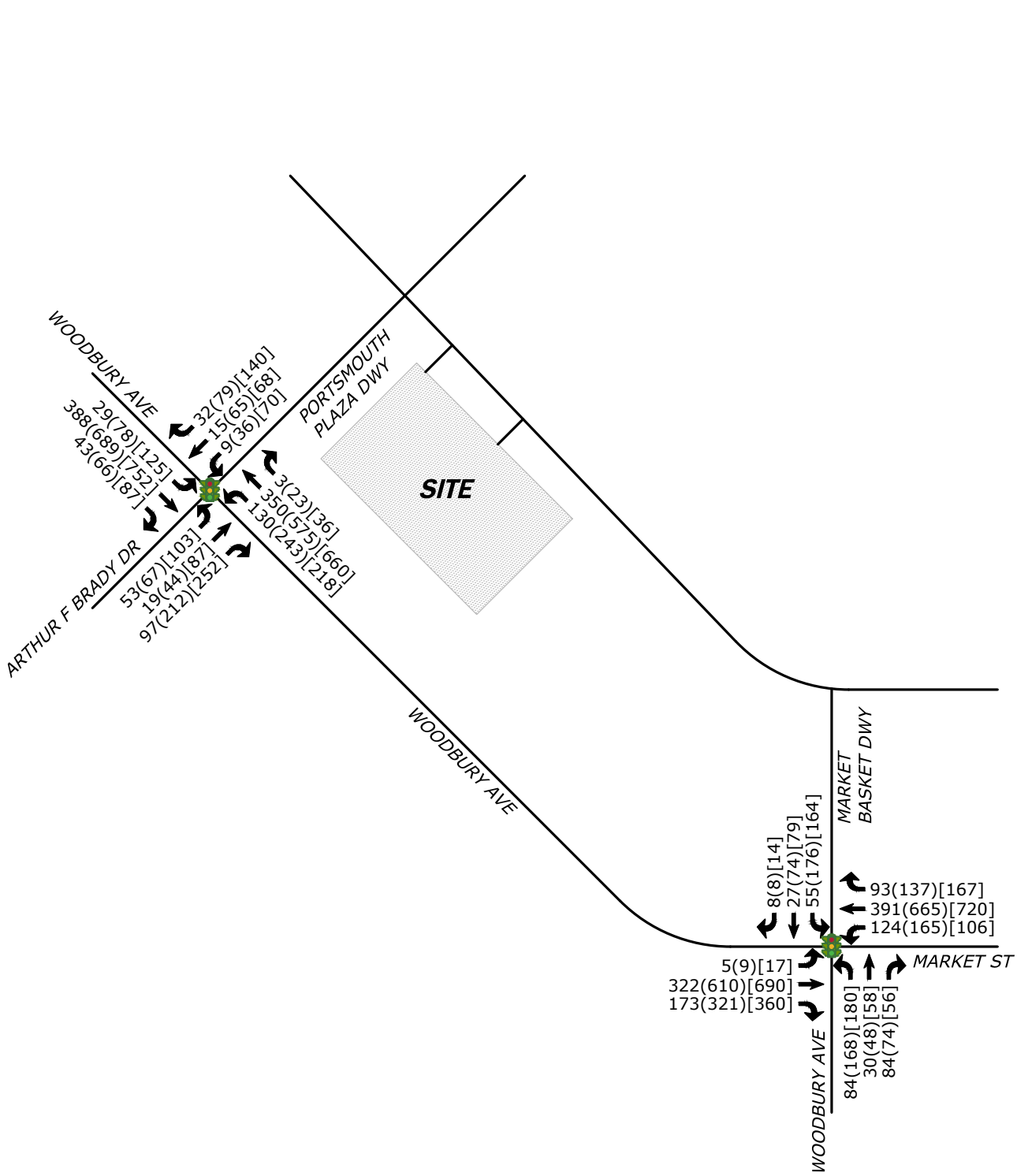
1465 WOODBURY AVENUE
PORTSMOUTH, NH

STUDY AREA

DATE:	6/23/2025
SCALE:	1" = 1000'
FIGURE:	1

Tighe&Bond

Jun 23, 2025-4:26pm Plotted By: RCase
Tighe & Bond, Inc. J:\Q\Q5004 Quincy & Company, Inc\0001_1465 Woodbury Avenue\Drawings\AutoCAD\Figures\Q5004-001 Traffic Study Area Figure.dwg



LEGEND

VOLUMES: AM (PM) [SAT]

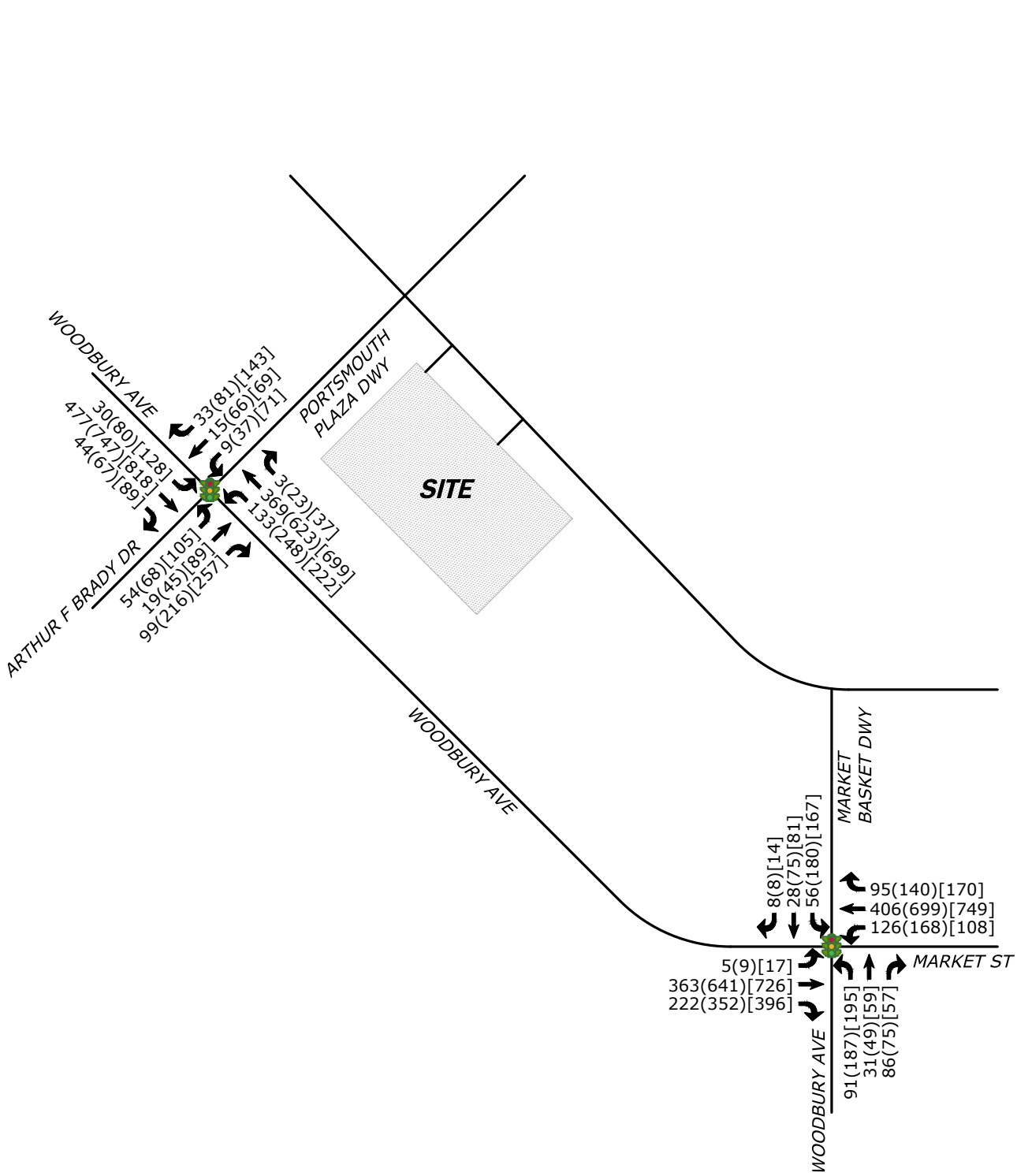
TRAFFIC SIGNAL

1465 WOODBURY AVENUE
PORTSMOUTH, NH

2025 EXISTING CONDITIONS
TRAFFIC VOLUMES

DATE:	6/24/2025
SCALE:	NO SCALE
FIGURE:	2

Tighe&Bond



LEGEND

VOLUMES: AM (PM) [SAT]

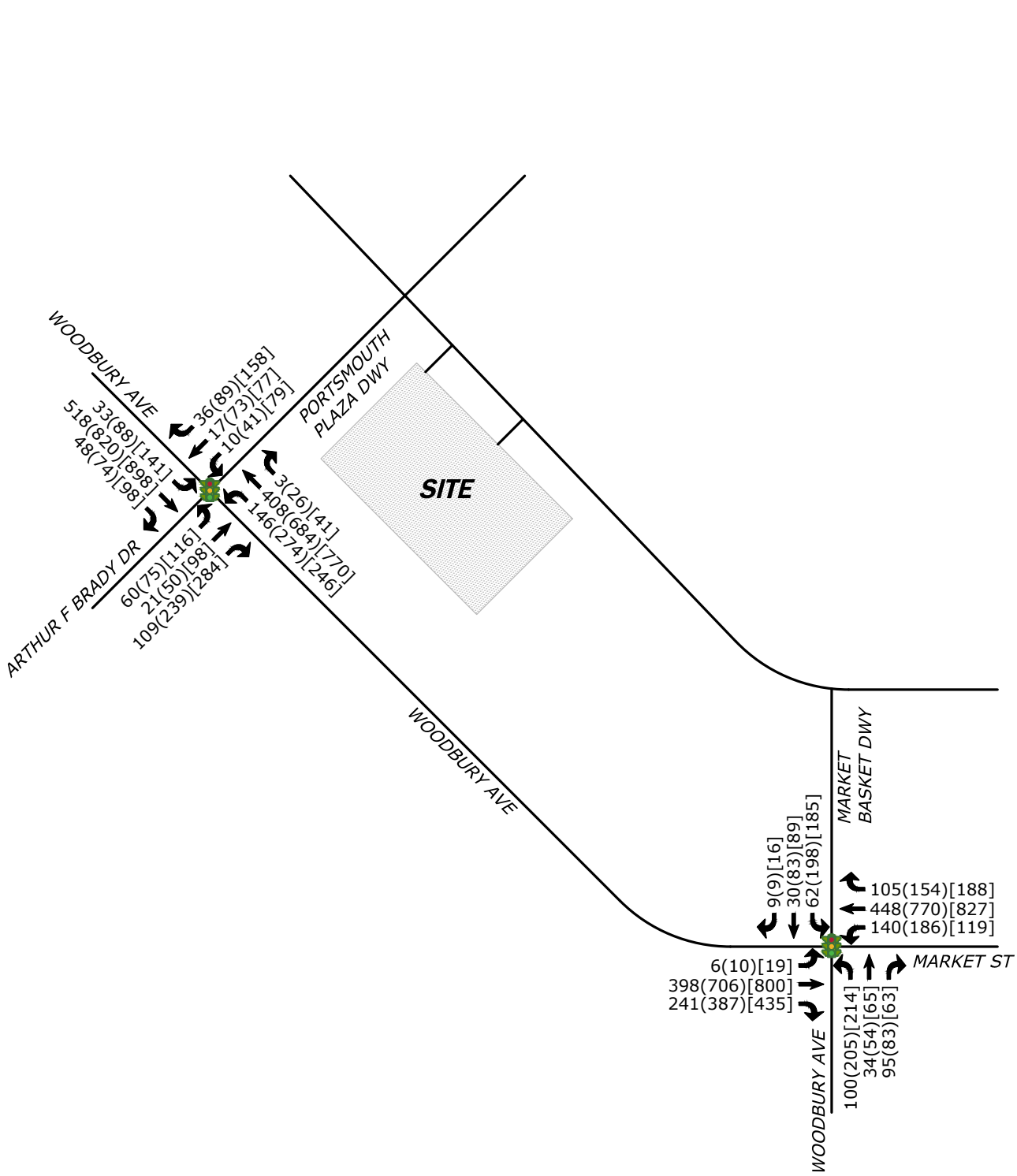
TRAFFIC SIGNAL

1465 WOODBURY AVENUE
PORTSMOUTH, NH

2027 NO-BUILD CONDITIONS
TRAFFIC VOLUMES

DATE:	6/24/2025
SCALE:	NO SCALE
FIGURE:	3

Tighe&Bond



LEGEND

VOLUMES: AM (PM) [SAT]

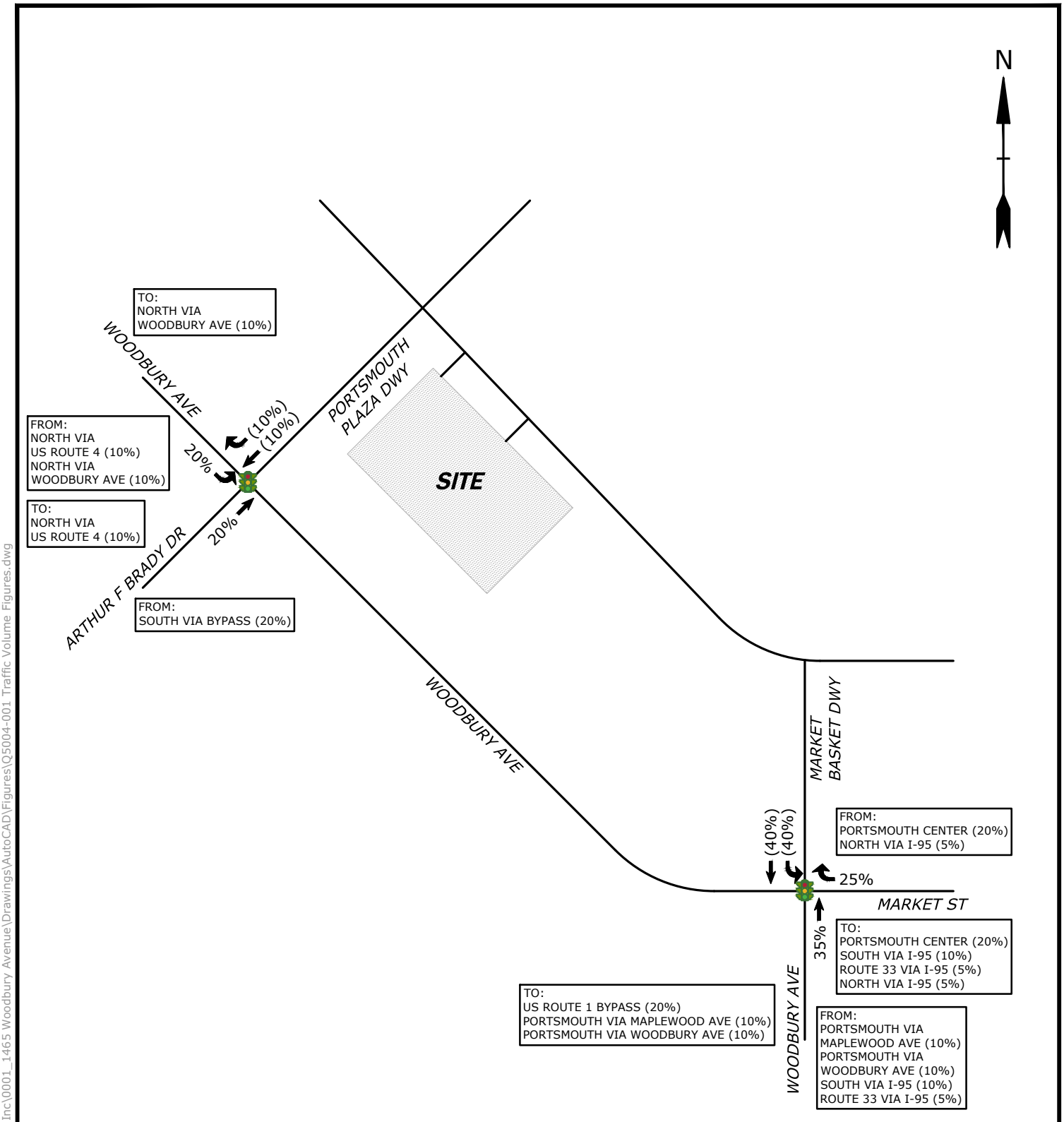
TRAFFIC SIGNAL

1465 WOODBURY AVENUE
PORTSMOUTH, NH

2037 NO-BUILD CONDITIONS
TRAFFIC VOLUMES

DATE:	6/24/2025
SCALE:	NO SCALE
FIGURE:	4

Tighe&Bond



LEGEND

VOLUMES: ENTERING (EXITING)

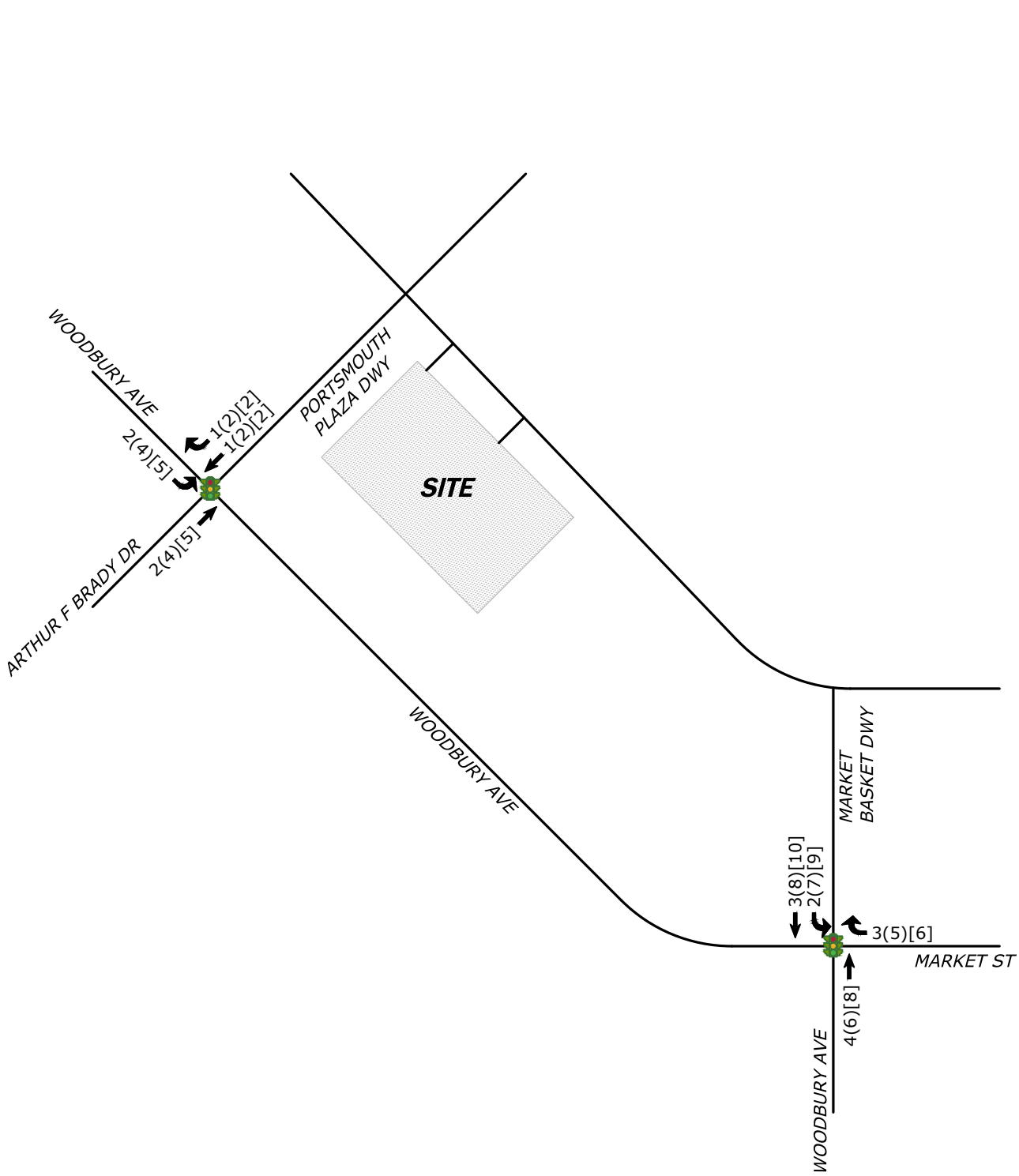
TRAFFIC SIGNAL

1465 WOODBURY AVENUE
PORTSMOUTH, NH

ARRIVAL & DEPARTURE
TRIP DISTRIBUTION

DATE:	6/24/2025
SCALE:	NO SCALE
FIGURE:	5

Tighe&Bond



LEGEND

VOLUMES: AM (PM) [SAT]

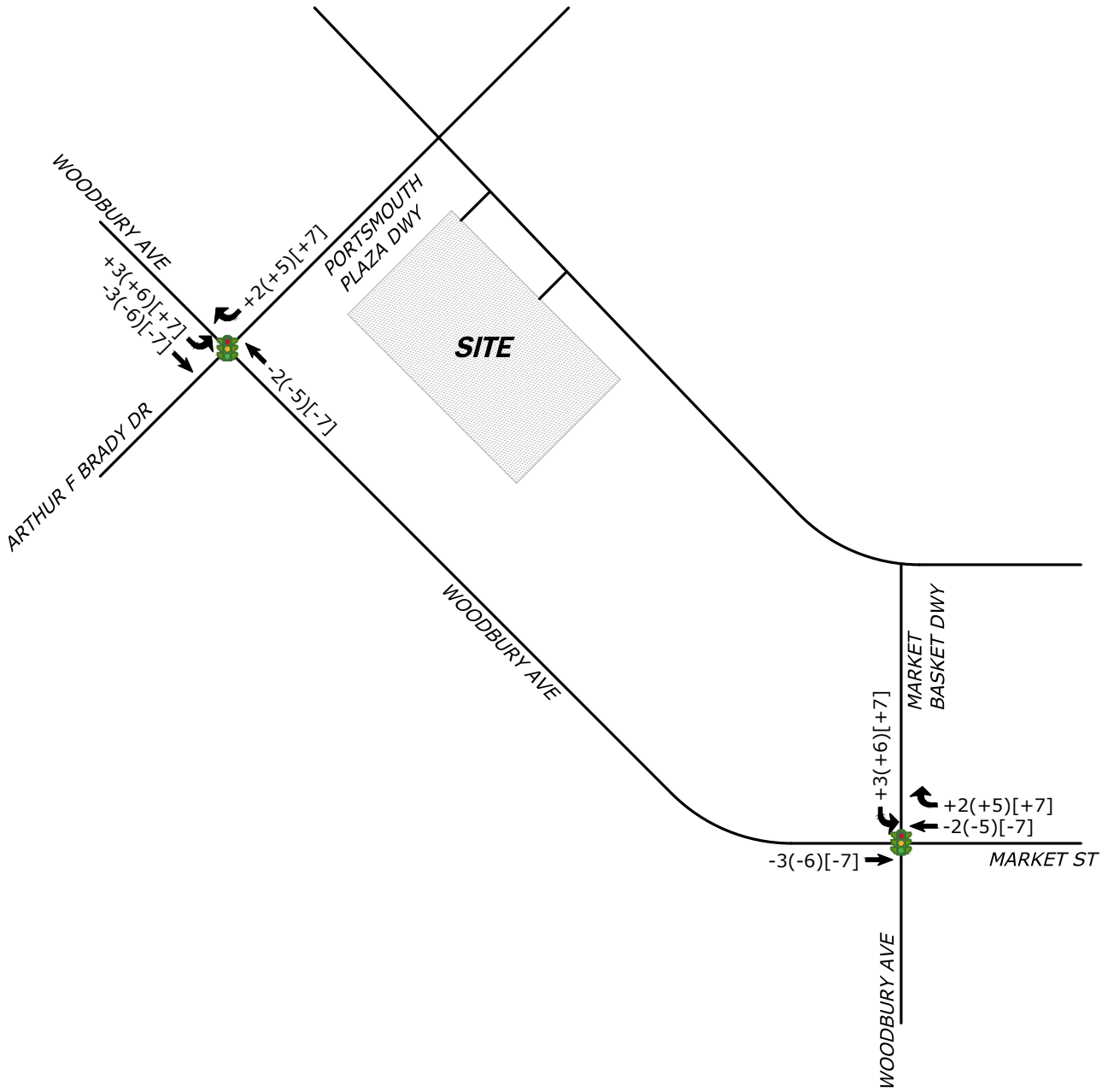
TRAFFIC SIGNAL

1465 WOODBURY AVENUE
PORTSMOUTH, NH

SITE GENERATED
TRAFFIC VOLUMES (NEW TRIPS)

DATE:	6/24/2025
SCALE:	NO SCALE
FIGURE:	6

Tighe&Bond



LEGEND

VOLUMES: AM (PM) [SAT]

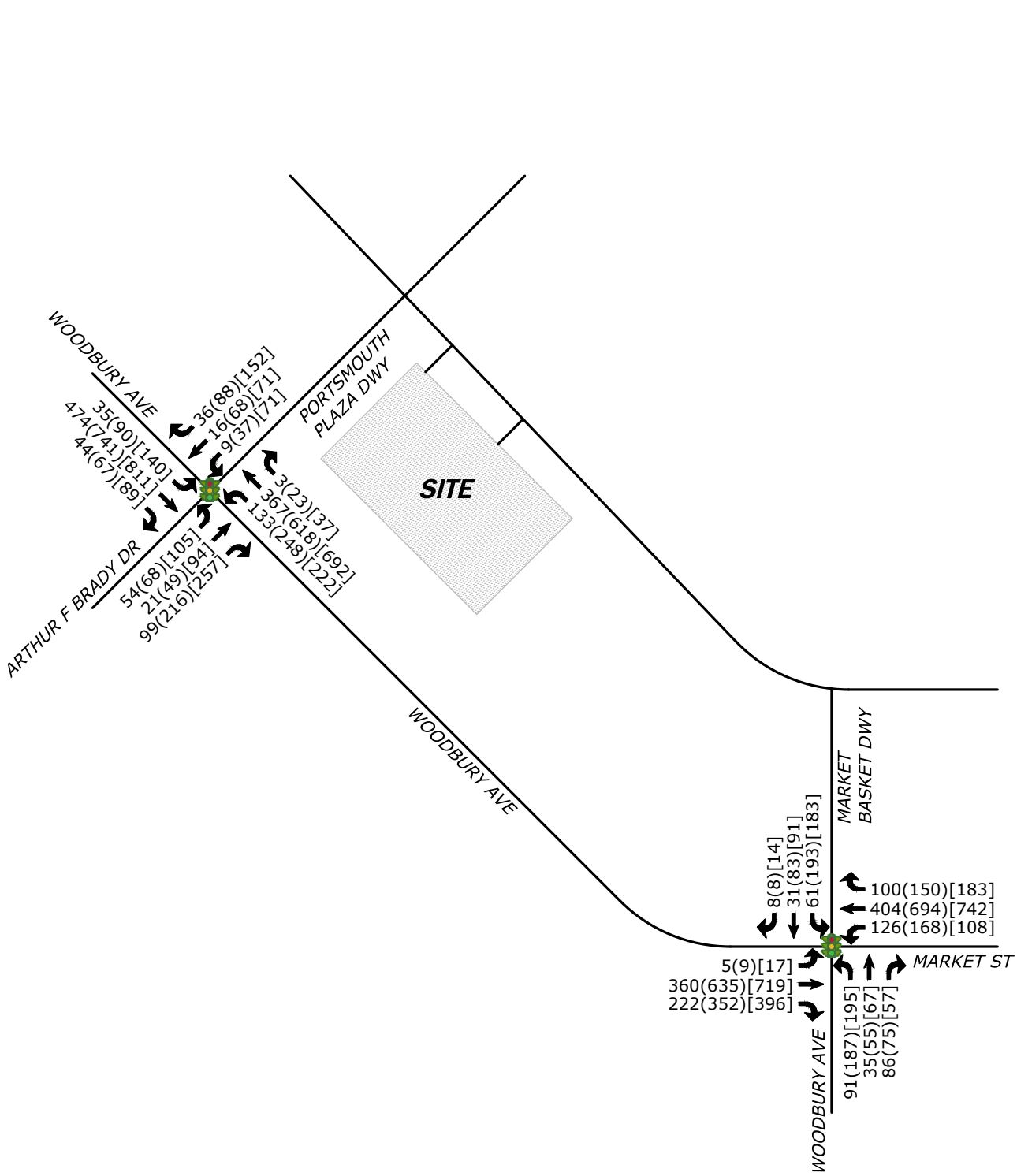
TRAFFIC SIGNAL

1465 WOODBURY AVENUE
PORTSMOUTH, NH

SITE GENERATED PASS-BY TRAFFIC VOLUMES

DATE:	6/24/2025
SCALE:	NO SCALE
FIGURE:	7

Tighe&Bond



LEGEND

VOLUMES: AM (PM) [SAT]

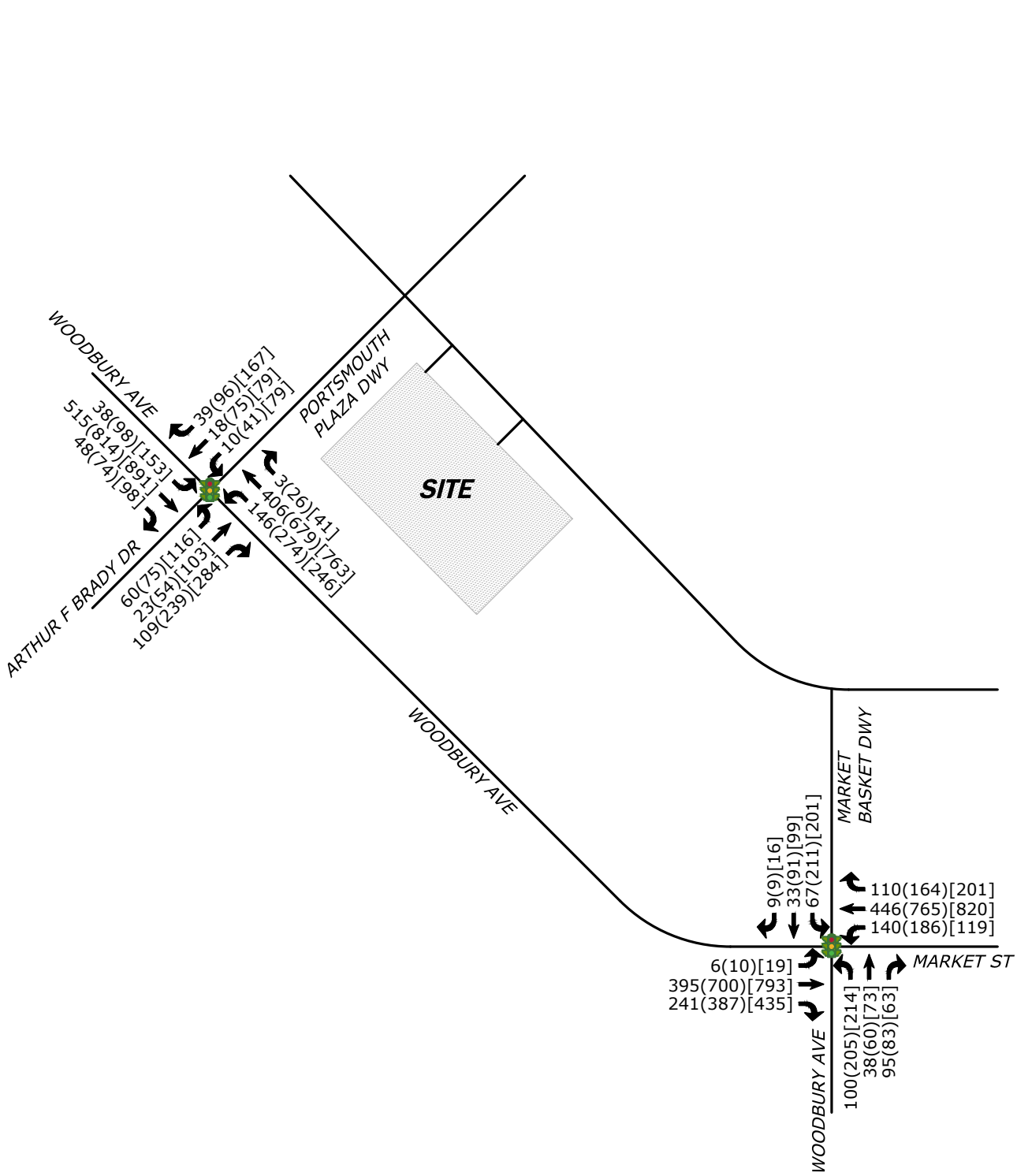
TRAFFIC SIGNAL

1465 WOODBURY AVENUE
PORTSMOUTH, NH

2027 BUILD CONDITIONS
TRAFFIC VOLUMES

DATE:	6/24/2025
SCALE:	NO SCALE
FIGURE:	8

Tighe&Bond



LEGEND

VOLUMES: AM (PM) [SAT]

TRAFFIC SIGNAL

1465 WOODBURY AVENUE
PORTSMOUTH, NH

2037 BUILD CONDITIONS
TRAFFIC VOLUMES

DATE:	6/24/2025
SCALE:	NO SCALE
FIGURE:	9

Tighe&Bond

APPENDIX A

Traffic Count Data

Client:	Matthew Stoutz
Project #:	1692_1_TB
BTD #:	Location 1
Location:	Portsmouth, NH
Street 1:	Woodbury Ave
Street 2:	Arthur Brady Drive
Count Date:	5/29/2025
Day of Week:	Thursday
Weather:	Clouds & Sun, 60°F

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PASSENGER CARS & HEAVY VEHICLES COMBINED

	Arthur Brady Drive Northbound				Shopping Center Driveway Southbound				Woodbury Ave Eastbound				Woodbury Ave Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	4	4	12	0	2	3	7	0	15	55	9	0	12	51	1
7:15 AM	0	8	2	12	0	1	3	6	0	6	73	7	0	23	67	1
7:30 AM	0	11	5	21	0	1	6	5	1	8	83	9	0	33	75	2
7:45 AM	0	12	4	19	0	1	2	8	0	6	97	10	1	40	72	1
8:00 AM	0	13	7	21	0	2	6	11	0	8	87	7	0	26	89	1
8:15 AM	0	17	7	24	0	4	4	5	0	7	104	15	0	29	88	1
8:30 AM	0	10	1	31	0	2	3	7	0	7	92	10	0	31	94	0
8:45 AM	0	8	7	27	0	1	6	7	0	7	92	11	1	31	74	0

	Arthur Brady Drive Northbound				Shopping Center Driveway Southbound				Woodbury Ave Eastbound				Woodbury Ave Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	23	10	61	0	7	15	22	0	19	153	22	0	63	127	1
4:15 PM	0	14	9	57	0	13	18	23	0	18	171	15	0	64	146	8
4:30 PM	0	11	13	45	0	9	13	13	0	16	185	14	0	54	144	6
4:45 PM	0	18	11	45	0	6	18	19	0	23	166	14	1	56	147	8
5:00 PM	0	10	16	51	0	8	14	18	0	12	160	21	0	56	135	7
5:15 PM	0	7	6	41	0	13	13	19	1	21	182	6	0	56	139	5
5:30 PM	0	14	21	46	0	8	16	25	0	16	163	11	1	42	124	3
5:45 PM	0	11	4	30	0	13	10	22	0	18	131	13	0	41	88	4

AM PEAK HOUR 7:45 AM to 8:45 AM	Arthur Brady Drive Northbound				Shopping Center Driveway Southbound				Woodbury Ave Eastbound				Woodbury Ave Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**52**	**19**	**95**	**0**	**9**	**15**	**31**	**0**	**28**	**380**	**42**	**1**	**126**	**343**	**3**
PHF		**0.86**				**0.72**				**0.89**				**0.95**		
HV %	**0.0%**	**1.9%**	**5.3%**	**1.1%**	**0.0%**	**0.0%**	**6.7%**	**3.2%**	**0.0%**	**0.0%**	**4.7%**	**2.4%**	**0.0%**	**4.8%**	**4.1%**	**0.0%**
			1.8%				3.6%				4.2%				4.2%	

PM PEAK HOUR 4:00 PM to 5:00 PM	Arthur Brady Drive Northbound				Shopping Center Driveway Southbound				Woodbury Ave Eastbound				Woodbury Ave Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**66**	**43**	**208**	**0**	**35**	**64**	**77**	**0**	**76**	**675**	**65**	**1**	**237**	**564**	**23**
PHF		**0.84**				**0.81**				**0.95**				**0.95**		
HV %	**0.0%**	**0.0%**	**2.3%**	**1.9%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.7%**	**3.1%**	**0.0%**	**1.7%**	**1.1%**	**0.0%**
			1.6%				0.0%				0.9%				1.2%	

Client:	Matthew Stoutz
Project #:	1692_1_TB
BTD #:	Location 1
Location:	Portsmouth, NH
Street 1:	Woodbury Ave
Street 2:	Arthur Brady Drive
Count Date:	5/29/2025
Day of Week:	Thursday
Weather:	Clouds & Sun, 60°F

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HEAVY VEHICLES

	Arthur Brady Drive Northbound				Shopping Center Driveway Southbound				Woodbury Ave Eastbound				Woodbury Ave Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	0	2	0	0	0	0	0	0	0	6	0	0	0	1	0
7:15 AM	0	0	0	1	0	0	0	0	0	0	3	0	0	0	4	0
7:30 AM	0	1	2	1	0	0	0	0	0	0	2	1	0	2	3	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	2	4	0
8:00 AM	0	1	0	0	0	0	0	1	0	0	5	0	0	0	2	0
8:15 AM	0	0	1	1	0	0	1	0	0	0	5	1	0	3	3	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	1	5	0
8:45 AM	0	0	0	1	0	0	0	0	0	0	2	1	0	0	1	0

	Arthur Brady Drive Northbound				Shopping Center Driveway Southbound				Woodbury Ave Eastbound				Woodbury Ave Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	0	1	2	0	0	0	0	0	0	2	1	0	0	2	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	2	2	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	2	1	0
4:45 PM	0	0	0	2	0	0	0	0	0	0	1	0	0	0	1	0
5:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	2	1	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	1	1	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0

AM PEAK HOUR 7:30 AM to 8:30 AM	Arthur Brady Drive Northbound				Shopping Center Driveway Southbound				Woodbury Ave Eastbound				Woodbury Ave Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**2**	**3**	**2**	**0**	**0**	**1**	**1**	**0**	**0**	**16**	**2**	**0**	**7**	**12**	**1**
PHF	**0.44**				**0.50**				**0.75**				**0.83**			

PM PEAK HOUR 4:00 PM to 5:00 PM	Arthur Brady Drive Northbound				Shopping Center Driveway Southbound				Woodbury Ave Eastbound				Woodbury Ave Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**1**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**2**	**0**	**4**	**6**	**0**
PHF	**0.42**				**0.00**				**0.58**				**0.63**			

Client:	Matthew Stoutz
Project #:	1692_1_TB
BTD #:	Location 1
Location:	Portsmouth, NH
Street 1:	Woodbury Ave
Street 2:	Arthur Brady Drive
Count Date:	5/29/2025
Day of Week:	Thursday
Weather:	Clouds & Sun, 60°F

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PEDESTRIANS & BICYCLES

	Arthur Brady Drive Northbound				Shopping Center Driveway Southbound				Woodbury Ave Eastbound				Woodbury Ave Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
7:30 AM	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1

	Arthur Brady Drive Northbound				Shopping Center Driveway Southbound				Woodbury Ave Eastbound				Woodbury Ave Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
4:30 PM	2	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0
4:45 PM	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0
5:00 PM	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0

AM PEAK HOUR[1] 7:45 AM to 8:45 AM	Arthur Brady Drive Northbound				Shopping Center Driveway Southbound				Woodbury Ave Eastbound				Woodbury Ave Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0

PM PEAK HOUR[1] 4:00 PM to 5:00 PM	Arthur Brady Drive Northbound				Shopping Center Driveway Southbound				Woodbury Ave Eastbound				Woodbury Ave Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	2	0	1	0	0	0	0	1	2	4	0	0	0	2	0	0

[1]*NOTE: Peak hour summaries here correspond to peak hours identified for passenger cars and heavy vehicles combined.*

Client:	Matthew Stoutz
Project #:	1692_1_TB
BTD #:	Location 1
Location:	Portsmouth, NH
Street 1:	Woodbury Ave
Street 2:	Arthur Brady Drive
Count Date:	5/31/2025
Day of Week:	Saturday
Weather:	Clouds & Sun, 60°F

BOSTON TRAFFIC DATA
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PASSENGER CARS & HEAVY VEHICLES COMBINED

	Arthur Brady Drive Northbound				Shopping Center Driveway Southbound				Woodbury Ave Eastbound				Woodbury Ave Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
11:00 AM	0	14	19	48	0	8	9	30	0	25	182	22	0	40	134	5
11:15 AM	0	18	15	63	0	9	11	34	0	26	161	17	1	45	156	7
11:30 AM	0	19	18	46	0	16	9	25	0	26	151	21	1	53	142	14
11:45 AM	0	19	26	48	0	11	13	33	0	29	205	16	0	40	161	13
12:00 PM	0	25	22	76	0	24	11	27	1	30	163	15	0	44	137	11
12:15 PM	0	25	17	69	0	17	20	35	1	27	172	17	0	36	129	8
12:30 PM	0	25	14	57	0	12	10	30	0	26	216	15	1	50	166	9
12:45 PM	0	29	21	64	0	14	13	36	0	24	162	17	1	49	172	10
1:00 PM	0	26	21	64	0	23	16	30	0	34	174	19	1	60	152	10
1:15 PM	0	20	21	60	0	20	21	38	0	34	205	24	0	49	164	8
1:30 PM	0	26	22	59	0	12	17	33	0	31	196	25	0	54	159	7
1:45 PM	0	14	15	56	0	14	20	52	0	23	203	22	0	40	118	10

MID PEAK HOUR 12:45 PM to 1:45 PM	Arthur Brady Drive Northbound				Shopping Center Driveway Southbound				Woodbury Ave Eastbound				Woodbury Ave Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**101**	**85**	**247**	**0**	**69**	**67**	**137**	**0**	**123**	**737**	**85**	**2**	**212**	**647**	**35**
PHF	**0.95**				**0.86**				**0.90**				**0.97**			
HV %	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**1.5%**	**0.0%**	**0.0%**	**0.0%**	**0.7%**	**0.0%**	**0.0%**	**0.5%**	**0.8%**	**0.0%**
	0.0%				0.4%				0.5%				0.7%			

Client:	Matthew Stoutz
Project #:	1692_1_TB
BTD #:	Location 1
Location:	Portsmouth, NH
Street 1:	Woodbury Ave
Street 2:	Arthur Brady Drive
Count Date:	5/31/2025
Day of Week:	Saturday
Weather:	Clouds & Sun, 60°F

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HEAVY VEHICLES

	Arthur Brady Drive Northbound				Shopping Center Driveway Southbound				Woodbury Ave Eastbound				Woodbury Ave Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
11:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0
11:15 AM	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0
11:30 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	2	2	0	0	0	1	0
12:00 PM	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
12:45 PM	0	0	0	0	0	0	1	0	0	0	2	0	0	0	3	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0

MID PEAK HOUR 11:00 AM to 12:00 PM	Arthur Brady Drive Northbound				Shopping Center Driveway Southbound				Woodbury Ave Eastbound				Woodbury Ave Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**4**	**2**	**0**	**1**	**2**	**0**
PHF	**0.50**				**0.00**				**0.50**				**0.75**			

Client:	Matthew Stoutz
Project #:	1692_1_TB
BTD #:	Location 1
Location:	Portsmouth, NH
Street 1:	Woodbury Ave
Street 2:	Arthur Brady Drive
Count Date:	5/31/2025
Day of Week:	Saturday
Weather:	Clouds & Sun, 60°F

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PEDESTRIANS & BICYCLES

	Arthur Brady Drive Northbound				Shopping Center Driveway Southbound				Woodbury Ave Eastbound				Woodbury Ave Westbound			
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0
12:30 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
1:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

MID PEAK HOUR 12:45 PM to 1:45 PM	Arthur Brady Drive Northbound				Shopping Center Driveway Southbound				Woodbury Ave Eastbound				Woodbury Ave Westbound			
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0

NOTE: Peak hour summaries here correspond to peak hours identified for passenger car and heavy vehicles combined.

Client:	Matthew Stoutz
Project #:	1692_1_TB
BTD #:	Location 2
Location:	Portsmouth, NH
Street 1:	Market Street
Street 2:	Woodbury Ave/Market Basket Drive
Count Date:	5/29/2025
Day of Week:	Thursday
Weather:	Clouds & Sun, 60°F

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PASSENGER CARS & HEAVY VEHICLES COMBINED

	Woodbury Ave Northbound				Market Basket Driveway Southbound				Market Street Eastbound				Market Street Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	11	6	3	0	4	5	1	0	2	52	17	0	8	56	11
7:15 AM	0	16	5	5	0	14	6	1	0	2	58	30	0	16	74	17
7:30 AM	0	28	6	13	0	15	6	3	0	0	55	43	0	14	81	21
7:45 AM	0	18	5	13	0	13	6	4	0	1	69	49	0	35	90	13
8:00 AM	0	24	3	21	0	9	7	3	0	0	77	39	0	25	94	25
8:15 AM	0	20	9	18	0	14	8	0	0	2	79	44	0	31	94	23
8:30 AM	0	16	7	23	0	12	3	3	0	1	87	38	0	40	111	17
8:45 AM	0	21	10	20	0	19	8	2	0	2	73	49	0	26	80	26

	Woodbury Ave Northbound				Market Basket Driveway Southbound				Market Street Eastbound				Market Street Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	45	10	23	0	51	14	5	1	5	139	81	0	35	151	35
4:15 PM	0	31	15	20	0	46	26	2	0	1	171	75	1	34	182	36
4:30 PM	0	40	16	16	0	41	14	3	0	3	132	84	0	39	154	34
4:45 PM	0	55	4	18	0	48	15	2	0	2	147	88	0	33	157	19
5:00 PM	1	38	12	19	0	38	18	1	0	3	148	68	0	55	158	45
5:15 PM	0	48	12	25	0	54	19	3	0	4	153	78	1	34	152	33
5:30 PM	0	40	15	17	0	44	13	1	1	6	154	64	2	36	125	32
5:45 PM	0	24	11	12	0	45	25	5	0	3	114	53	0	28	109	27

AM PEAK HOUR 8:00 AM to 9:00 AM	Woodbury Ave Northbound				Market Basket Driveway Southbound				Market Street Eastbound				Market Street Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**81**	**29**	**82**	**0**	**54**	**26**	**8**	**0**	**5**	**316**	**170**	**0**	**122**	**379**	**91**
PHF		**0.94**				**0.76**				**0.97**				**0.88**		
HV %	**0.0%**	**1.2%**	**0.0%**	**2.4%**	**0.0%**	**5.6%**	**3.8%**	**12.5%**	**0.0%**	**0.0%**	**4.1%**	**3.5%**	**0.0%**	**0.0%**	**3.4%**	**0.0%**
			1.6%				5.7%				3.9%				2.2%	

PM PEAK HOUR 4:15 PM to 5:15 PM	Woodbury Ave Northbound				Market Basket Driveway Southbound				Market Street Eastbound				Market Street Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	1	**164**	**47**	**73**	**0**	**173**	**73**	**8**	**0**	**9**	**598**	**315**	**1**	**161**	**651**	**134**
PHF		**0.93**				**0.86**				**0.93**				**0.92**		
HV %	**0.0%**	**0.0%**	**0.0%**	**1.4%**	**0.0%**	**0.6%**	**1.4%**	**12.5%**	**0.0%**	**0.0%**	**0.3%**	**1.3%**	**0.0%**	**0.6%**	**1.5%**	**1.5%**
			0.4%				1.2%				0.7%				1.4%	

Client:	Matthew Stoutz
Project #:	1692_1_TB
BTD #:	Location 2
Location:	Portsmouth, NH
Street 1:	Market Street
Street 2:	Woodbury Ave/Market Basket Drive
Count Date:	5/29/2025
Day of Week:	Thursday
Weather:	Clouds & Sun, 60°F

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HEAVY VEHICLES

	Woodbury Ave Northbound				Market Basket Driveway Southbound				Market Street Eastbound				Market Street Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	0	0	0	0	0	1	0	0	0	4	1	0	1	1	0
7:15 AM	0	0	0	2	0	2	0	0	0	0	3	1	0	0	4	0
7:30 AM	0	2	0	2	0	0	1	0	0	0	2	1	0	2	4	0
7:45 AM	0	1	0	0	0	0	0	0	0	0	4	0	0	1	5	0
8:00 AM	0	1	0	1	0	0	0	0	0	0	4	1	0	0	1	0
8:15 AM	0	0	0	0	0	2	1	0	0	0	4	1	0	0	6	0
8:30 AM	0	0	0	0	0	1	0	1	0	0	3	1	0	0	5	0
8:45 AM	0	0	0	1	0	0	0	0	0	0	2	3	0	0	1	0

	Woodbury Ave Northbound				Market Basket Driveway Southbound				Market Street Eastbound				Market Street Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	0	0	0	0	1	0	0	0	0	3	1	0	0	2	0
4:15 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	4	0
4:30 PM	0	0	0	0	0	1	0	0	0	0	0	1	0	1	3	1
4:45 PM	0	0	0	0	0	0	0	1	0	0	2	1	0	0	0	1
5:00 PM	0	0	0	1	0	0	0	0	0	0	0	1	0	0	3	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0

AM PEAK HOUR 7:30 AM to 8:30 AM	Woodbury Ave Northbound				Market Basket Driveway Southbound				Market Street Eastbound				Market Street Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**4**	**0**	**3**	**0**	**2**	**2**	**0**	**0**	**0**	**14**	**3**	**0**	**3**	**16**	**0**
PHF	**0.44**				**0.33**				**0.85**				**0.79**			

PM PEAK HOUR 4:00 PM to 5:00 PM	Woodbury Ave Northbound				Market Basket Driveway Southbound				Market Street Eastbound				Market Street Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**0**	**0**	**0**	**2**	**1**	**1**	**0**	**0**	**5**	**4**	**0**	**1**	**9**	**2**
PHF	**0.00**				**1.00**				**0.56**				**0.60**			

Client:	Matthew Stoutz
Project #:	1692_1_TB
BTD #:	Location 2
Location:	Portsmouth, NH
Street 1:	Market Street
Street 2:	Woodbury Ave/Market Basket Drive
Count Date:	5/29/2025
Day of Week:	Thursday
Weather:	Clouds & Sun, 60°F

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PEDESTRIANS & BICYCLES

	Woodbury Ave Northbound				Market Basket Driveway Southbound				Market Street Eastbound				Market Street Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
7:30 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0

	Woodbury Ave Northbound				Market Basket Driveway Southbound				Market Street Eastbound				Market Street Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
4:45 PM	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
5:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM PEAK HOUR[1] 8:00 AM to 9:00 AM	Woodbury Ave Northbound				Market Basket Driveway Southbound				Market Street Eastbound				Market Street Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0

PM PEAK HOUR[1] 4:15 PM to 5:15 PM	Woodbury Ave Northbound				Market Basket Driveway Southbound				Market Street Eastbound				Market Street Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	0	0	0	0	1	0	0	3	0	2	1	0	0	0	0	3

[1]*NOTE: Peak hour summaries here correspond to peak hours identified for passenger cars and heavy vehicles combined.*

Client:	Matthew Stoutz
Project #:	1692_1_TB
BTD #:	Location 2
Location:	Portsmouth, NH
Street 1:	Market Street
Street 2:	Woodbury Ave/Market Basket Drive
Count Date:	5/31/2025
Day of Week:	Saturday
Weather:	Clouds & Sun, 60°F

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PASSENGER CARS & HEAVY VEHICLES COMBINED

	Woodbury Ave Northbound				Market Basket Driveway Southbound				Market Street Eastbound				Market Street Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
11:00 AM	0	23	9	11	0	44	27	6	0	1	142	81	0	26	146	39
11:15 AM	0	29	15	11	0	31	17	7	0	4	162	80	1	21	176	30
11:30 AM	0	46	15	13	0	32	15	5	0	4	128	73	0	24	160	47
11:45 AM	0	45	13	16	0	41	13	4	0	0	159	96	0	22	163	42
12:00 PM	0	31	17	7	0	39	8	8	0	2	172	92	3	21	151	26
12:15 PM	0	33	16	14	0	42	27	3	0	2	187	79	0	25	150	43
12:30 PM	0	40	16	9	0	36	18	3	0	5	182	93	0	32	171	37
12:45 PM	0	39	12	16	0	42	20	3	1	4	141	87	0	23	188	40
1:00 PM	0	41	15	16	0	42	21	3	0	3	186	84	0	20	193	43
1:15 PM	0	44	20	10	0	39	17	5	1	3	179	87	2	25	158	29
1:30 PM	0	51	10	13	0	38	19	3	0	5	170	95	3	31	163	52
1:45 PM	0	34	13	13	0	49	22	2	0	1	165	118	0	22	134	43

MID PEAK HOUR 12:45 PM to 1:45 PM	Woodbury Ave Northbound				Market Basket Driveway Southbound				Market Street Eastbound				Market Street Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**175**	**57**	**55**	**0**	**161**	**77**	**14**	**2**	**15**	**676**	**353**	**5**	**99**	**702**	**164**
PHF	**0.97**				**0.95**				**0.96**				**0.95**			
HV %	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.6%**	**0.3%**	**0.0%**	**4.0%**	**0.9%**	**0.0%**
	0.0%				0.4%				0.5%				1.0%			

Client:	Matthew Stoutz
Project #:	1692_1_TB
BTD #:	Location 2
Location:	Portsmouth, NH
Street 1:	Market Street
Street 2:	Woodbury Ave/Market Basket Drive
Count Date:	5/31/2025
Day of Week:	Saturday
Weather:	Clouds & Sun, 60°F

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HEAVY VEHICLES

	Woodbury Ave Northbound				Market Basket Driveway Southbound				Market Street Eastbound				Market Street Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
11:00 AM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1
11:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
11:45 AM	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0
12:00 PM	0	0	0	0	0	1	0	1	0	0	1	0	0	1	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
12:30 PM	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
12:45 PM	0	0	0	0	0	1	0	0	0	0	1	1	0	0	3	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0

MID PEAK HOUR 12:45 PM to 1:45 PM	Woodbury Ave Northbound				Market Basket Driveway Southbound				Market Street Eastbound				Market Street Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**4**	**1**	**0**	**4**	**6**	**0**
PHF	**0.00**				**0.25**				**0.63**				**0.83**			

Client:	Matthew Stoutz
Project #:	1692_1_TB
BTD #:	Location 2
Location:	Portsmouth, NH
Street 1:	Market Street
Street 2:	Woodbury Ave/Market Basket Drive
Count Date:	5/31/2025
Day of Week:	Saturday
Weather:	Clouds & Sun, 60°F

BOSTON TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
www.BostonTrafficData.com

PEDESTRIANS & BICYCLES

	Woodbury Ave Northbound				Market Basket Driveway Southbound				Market Street Eastbound				Market Street Westbound			
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:15 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0
12:30 PM	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0
12:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

MID PEAK HOUR 12:45 PM to 1:45 PM	Woodbury Ave Northbound				Market Basket Driveway Southbound				Market Street Eastbound				Market Street Westbound			
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
	1	0	0	0	1	0	0	1	0	0	0	2	0	0	0	0

NOTE: Peak hour summaries here correspond to peak hours identified for passenger car and heavy vehicles combined.

APPENDIX B

NHDOT Traffic Data

Group 4 Averages: Urban Highways

Month	MADT	Adjustment to Average	Adjustment to Peak
January	14,556	1.04	1.09
February	15,385	0.98	1.03
March	14,276	1.06	1.11
April	14,515	1.04	1.10
May	15,571	0.97	1.02
June	15,918	0.95	1.00
July	15,765	0.96	1.01
August	15,856	0.95	1.00
September	15,571	0.97	1.02
October	15,698	0.96	1.01
November	14,429	1.05	1.10
December	13,960	1.08	1.14

Average ADT: 15,125
Peak ADT: 15,918

GROUP	Station	TOWN	LOCATION
04	02051003	Bow	NH 3A south of Robinson Rd
04	02089001	Chichester	NH 28 (Suncook Valley Rd) north of Bear Hill Rd
04	02091001	Claremont	NH 12/103 east of Vermont SL
04	02125001	Dover	Dover Point Rd south of Thornwood Ln
04	02133021	Durham	US 4 east of NH 108
04	02229022	Hudson	Circumferential Hwy east of Nashua TL
04	02253025	Lebanon	NH 120 1 mile south of Hanover TL (south of Lahaye Dr)
04	02255001	Barrington	NH 125 (Calef Hwy) north of Pinkham Rd
04	02287001	Marlborough	NH 12 at Swanzey TL
04	02297001	Merrimack	US 3 (Daniel Webster Hwy) north of Hilton Dr
04	*02303001*	*Amherst*	*NH 101A at Amherst TL (west of Overlook Dr)*
04	*02315051*	*Hudson*	*NH 111 (Bridge / Ferry St) at Hudson TL*
04	02339001	Newport	NH 10 1 mile south of Croydon TL (north of Corbin Rd)
04	02345001	North Hampton	US 1 (Lafayette Rd) north of North Rd
04	02445001	Wilton	NH 101 at Wilton TL (west of Old County Farm Rd)
04	*02489001*	*Windham*	*NH 28 at Derry TL (north of Northland Rd)*
04	*62099056*	*Concord*	*NH 106 (Sheep Davis Rd) at Loudon TL (north of Ashby Rd)*
04	*62099059*	*Concord*	*Clinton St Rte: NH 13*
04	*62387052*	*Rindge*	*US 202 at Jaffrey TL (north of County Rd)*
04	62389040	Rochester	Spaulding Tpke N
04	72099278	Concord	US 3 (Fisherville Rd) north of Sewalls Falls Rd
04	82037087	Bedford	New Boston Rd
04	*82101031*	*Conway*	*White Mountain Hwy at Washington St*
04	*82101032*	*Conway*	*Pleasent St*
04	*82101033*	*Conway*	*White Mountain Hwy at Pleasant St*
04	*82169060*	*Gilford*	*Weirs Rd Rte: NH 11B*
04	82197076	Hampton Falls	US 1 (Lafayette Rd) south of Ramp to NH 101
04	*82213067*	*Henniker*	*Rush Rd*
04	*82237075*	*Keene*	*Keene By-Pass Rte: NH 101*
04	82243052	Kingston	NH Route 125 Rte: NH 107
04	82253117	Lebanon	Meriden Rd Rte: NH 120
04	*82253119*	*Lebanon*	*Etna Rd*
04	*82303020*	*Milford*	*NH 101 (Milford Bypass) North of Phelan Rd*
04	*82303066*	*Milford*	*NH 101 (Milford Bypass) East of NH 13*

** denotes Station that is not included in calculation*

	Region E	
Year	VPY	Annual Change
2004	1,353,263	
2005	1,336,129	-1.27%
2006	1,340,011	0.29%
2007	1,341,995	0.15%
2008	1,285,116	-4.24%
2009	1,303,948	1.47%
2010	1,312,251	0.64%
2011	1,279,824	-2.47%
2012	1,284,314	0.35%
2013	1,298,171	1.08%
2014	1,320,862	1.75%
2015	1,353,486	2.47%
2016	1,385,361	2.36%
2017	1,396,932	0.84%
2018	1,408,237	0.81%
2019	1,422,176	0.99%
2020	1,176,424	-17.28%
2021	1,326,889	12.79%
2022	1,367,310	3.05%
2023	1,409,876	3.11%
2024	1,439,862	2.13%

20 Year CAGR:	0.31%	10 Year CAGR:	0.87%
20 Year EXP:	0.24%	10 Year EXP:	0.25%
20-Average:	0.27%	10-Average:	0.56%

APPENDIX C

Capacity Analysis Methodology

CAPACITY ANALYSIS METHODOLOGY

A primary result of capacity analysis is the assignment of levels of service to traffic facilities under various traffic flow conditions. The capacity analysis methodology is based on the concepts and procedures in the *Highway Capacity Manual* (HCM).[1] The concept of level of service (LOS) is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A level-of-service definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

Six levels of service are defined for each type of facility. They are given letter designations from A to F, with LOS A representing the best operating conditions and LOS F the worst. Since the level of service of a traffic facility is a function of the traffic flows placed upon it, such a facility may operate at a wide range of levels of service, depending on the time of day, day of week, or period of year. A description of the operating condition under each level of service is provided below:

- *LOS A* describes conditions with little to no delay to motorists.
- *LOS B* represents a desirable level with relatively low delay to motorists.
- *LOS C* describes conditions with average delays to motorists.
- *LOS D* describes operations where the influence of congestion becomes more noticeable. Delays are still within an acceptable range.
- *LOS E* represents operating conditions with high delay values. This level is considered by many agencies to be the limit of acceptable delay.
- *LOS F* is considered to be unacceptable to most drivers with high delay values that often occur, when arrival flow rates exceed the capacity of the intersection.

Signalized Intersections

Levels of service for signalized intersections are also calculated using the operational analysis methodology of the HCM. The methodology for signalized intersections assesses the effects of signal type, timing, phasing, and progression; vehicle mix; and geometrics on average *control* delay. Control delay is used to establish the operating characteristics for an intersection or an approach to an intersection. Volume-to-capacity (v/c) ratios are also used to help signify the utilization of a lane group's capacity at an intersection. A v/c ratio of ≥1.00 represents conditions when the traffic signal cycle capacity is fully utilized and indicates a capacity failure. The level-of-service criteria for signalized intersections are shown in Table A-1.

[1] *Highway Capacity Manual, 6TH Edition: A Guide for Multimodal Mobility Analysis.* Washington, D.C.: Transportation Research Board, 2016.

Unsignalized Intersections

Levels of service for unsignalized intersections are calculated using the operational analysis methodology of the HCM. The procedure accounts for lane configuration on both the minor and major street approaches, conflicting traffic stream volumes, and the type of intersection control (STOP, YIELD, or all-way STOP control). The definition of level of service for unsignalized intersections is a function of average *control* delay. Control delay at an unsignalized intersection is defined as the total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line. This time includes the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position.

Volume-to-capacity (v/c) ratios are also used to help signify the utilization of a movement's capacity at an intersection. A v/c ratio of ≥1.00 represents conditions when the movement is fully utilized and indicates a capacity failure. The capacity of the movements is based on the distribution of gaps in the major street traffic stream, the selection of gaps to complete the desired movement, and the follow-up headways for each driver in the queue. When an unsignalized intersection is located within 0.25 miles of a signalized intersection, traffic flows may not be random and some platoon structure may exist, thereby affecting the minor street operations. The level-of-service criteria for unsignalized intersections are shown in Table A-1.

TABLE A-1
Level-of-Service Criteria for Intersections

Level of Service	**Signalized Intersection Criteria** Average Control Delay (Seconds per Vehicle)	**Unsignalized Intersection Criteria** Average Control Delay (Seconds per Vehicle)	**V/C Ratio >1.00[a]**
A	≤10	≤10	F
B	>10 and ≤20	>10 and ≤15	F
C	>20 and ≤35	>15 and ≤25	F
D	>35 and ≤55	>25 and ≤35	F
E	>55 and ≤80	>35 and ≤50	F
F	>80	>50	F

Note: [a]For approach-based and intersection-wide assessments, LOS is defined solely by control delay.

Source: *Highway Capacity Manual, 6th Edition: A Guide for Multimodal Mobility Analysis.* Washington, D.C.: Transportation Research Board, 2016. Exhibit 19-8, Pg. 19-16.

For signalized intersections, this delay criterion may be applied in assigning level-of-service designations to individual lane groups, to individual intersection approaches, or to the entire intersection. For unsignalized intersections, this delay criterion may be applied in assigning level-of-service designations to individual lane groups on the minor street approaches or to the left turns from the major street approaches.

APPENDIX D

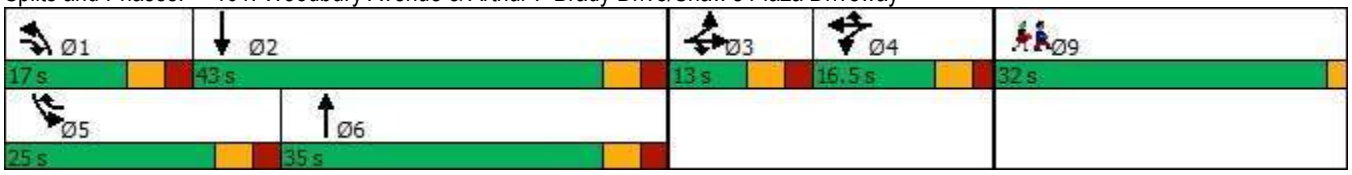
Capacity Analysis Worksheets

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	19	97	9	15	32	130	350	3	29	388	43
Future Volume (vph)	53	19	97	9	15	32	130	350	3	29	388	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	10	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		100	0		0	300		0	250		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		432			159			782			407	
Travel Time (s)		9.8			4.3			17.8			9.3	
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	1 3	4	4	4 5	1	6		5	2	
Permitted Phases												
Detector Phase	3	3	1 3	4	4	4 5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.0	12.0		11.5	11.5		12.0	16.0		12.0	16.0	
Total Split (s)	13.0	13.0		16.5	16.5		17.0	35.0		25.0	43.0	
Total Split (%)	10.7%	10.7%		13.6%	13.6%		14.0%	28.8%		20.6%	35.4%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.5	2.5		2.0	2.0		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		Min	Min	

Intersection Summary

Area Type: Other
Cycle Length: 121.5
Actuated Cycle Length: 60.6
Natural Cycle: 85
Control Type: Actuated-Uncoordinated

Splits and Phases: 101: Woodbury Avenue & Arthur F Brady Drive/Shaw's Plaza Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	26%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

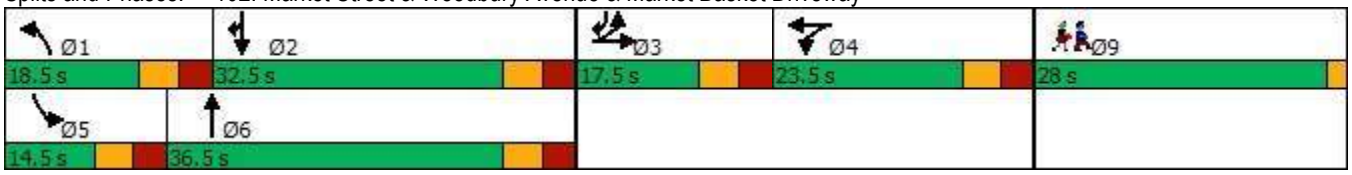
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	30	84	55	27	8	124	391	93	5	322	173
Future Volume (vph)	84	30	84	55	27	8	124	391	93	5	322	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Storage Length (ft)	275		0	0		0	300		0	275		275
Storage Lanes	2		0	1		0	1		0	1		0
Taper Length (ft)	100			25			100			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		707			198			600			782	
Travel Time (s)		16.1			5.4			13.6			17.8	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Detector Phase	3	3		4	4		1	6		5	2	2 3
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.5	12.5		12.5	12.5		12.5	16.5		12.5	16.5	
Total Split (s)	17.5	17.5		23.5	23.5		18.5	36.5		14.5	32.5	
Total Split (%)	14.6%	14.6%		19.6%	19.6%		15.4%	30.4%		12.1%	27.1%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 70.6
Natural Cycle: 85
Control Type: Actuated-Uncoordinated

Splits and Phases: 102: Market Street & Woodbury Avenue & Market Basket Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	23%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	19	97	9	15	32	130	350	3	29	388	43
Future Volume (vph)	53	19	97	9	15	32	130	350	3	29	388	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	10	11	11
Total Lost time (s)		6.0	6.0		5.5	5.5	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.96	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1737	1531		1673	1449	1678	3351		1620	3306	
Flt Permitted		0.96	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1737	1531		1673	1449	1678	3351		1620	3306	
Peak-hour factor, PHF	0.86	0.86	0.86	0.72	0.72	0.72	0.95	0.95	0.95	0.89	0.89	0.89
Adj. Flow (vph)	62	22	113	12	21	44	137	368	3	33	436	48
RTOR Reduction (vph)	0	0	80	0	0	31	0	1	0	0	8	0
Lane Group Flow (vph)	0	84	33	0	34	13	137	370	0	33	476	0
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	1 3	4	4	4 5	1	6		5	2	
Permitted Phases												
Actuated Green, G (s)		7.2	18.1		5.5	18.2	10.9	18.1		7.2	14.4	
Effective Green, g (s)		7.2	18.1		5.5	18.2	10.9	18.1		7.2	14.4	
Actuated g/C Ratio		0.12	0.29		0.09	0.30	0.18	0.29		0.12	0.23	
Clearance Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		203	450		149	428	297	986		189	774	
v/s Ratio Prot		c0.05	0.02		c0.02	0.01	c0.08	c0.11		0.02	c0.14	
v/s Ratio Perm												
v/c Ratio		0.41	0.07		0.23	0.03	0.46	0.38		0.17	0.62	
Uniform Delay, d1		25.2	15.7		26.0	15.4	22.7	17.2		24.5	21.1	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.4	0.1		0.8	0.0	1.1	0.2		0.4	1.5	
Delay (s)		26.6	15.7		26.8	15.4	23.8	17.5		24.9	22.5	
Level of Service		C	B		C	B	C	B		C	C	
Approach Delay (s)		20.3			20.4			19.2			22.7	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	61.5	Sum of lost time (s)	25.5
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	30	84	55	27	8	124	391	93	5	322	173
Future Volume (vph)	84	30	84	55	27	8	124	391	93	5	322	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.96		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3236	1562		1862	1891		1711	3322		1678	3355	1501
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3236	1562		1862	1891		1711	3322		1678	3355	1501
Peak-hour factor, PHF	0.94	0.94	0.94	0.76	0.76	0.76	0.88	0.88	0.88	0.97	0.97	0.97
Adj. Flow (vph)	89	32	89	72	36	11	141	444	106	5	332	178
RTOR Reduction (vph)	0	80	0	0	10	0	0	14	0	0	0	98
Lane Group Flow (vph)	89	41	0	72	37	0	141	536	0	5	332	80
Heavy Vehicles (%)	2%	2%	2%	6%	6%	6%	2%	2%	2%	4%	4%	4%
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Actuated Green, G (s)	8.2	8.2		6.9	6.9		11.7	31.2		0.8	20.3	35.0
Effective Green, g (s)	8.2	8.2		6.9	6.9		11.7	31.2		0.8	20.3	35.0
Actuated g/C Ratio	0.10	0.10		0.09	0.09		0.15	0.40		0.01	0.26	0.45
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	339	163		164	166		255	1325		17	870	671
v/s Ratio Prot	c0.03	0.03		c0.04	0.02		c0.08	c0.16		0.00	0.10	0.05
v/s Ratio Perm												
v/c Ratio	0.26	0.25		0.44	0.22		0.55	0.40		0.29	0.38	0.12
Uniform Delay, d1	32.2	32.2		33.8	33.2		30.8	16.8		38.4	23.8	12.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.4	0.8		1.9	0.7		2.6	0.2		9.4	0.3	0.1
Delay (s)	32.6	33.0		35.7	33.8		33.4	17.0		47.8	24.1	12.7
Level of Service	C	C		D	C		C	B		D	C	B
Approach Delay (s)		32.8			35.0			20.4			20.4	
Approach LOS		C			C			C			C	

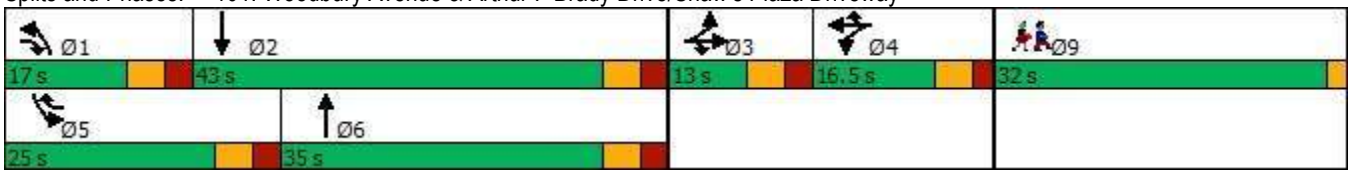
Intersection Summary			
HCM 2000 Control Delay	23.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	78.2	Sum of lost time (s)	28.0
Intersection Capacity Utilization	44.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	44	212	36	65	79	243	575	23	78	689	66
Future Volume (vph)	67	44	212	36	65	79	243	575	23	78	689	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	10	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		100	0		0	300		0	250		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		432			159			782			407	
Travel Time (s)		9.8			4.3			17.8			9.3	
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	3 1	4	4	4 5	1	6		5	2	
Permitted Phases												
Detector Phase	3	3	3 1	4	4	4 5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.0	12.0		11.5	11.5		12.0	16.0		12.0	16.0	
Total Split (s)	13.0	13.0		16.5	16.5		17.0	35.0		25.0	43.0	
Total Split (%)	10.7%	10.7%		13.6%	13.6%		14.0%	28.8%		20.6%	35.4%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.5	2.5		2.0	2.0		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		Min	Min	

Intersection Summary

Area Type: Other
Cycle Length: 121.5
Actuated Cycle Length: 83.2
Natural Cycle: 115
Control Type: Actuated-Uncoordinated

Splits and Phases: 101: Woodbury Avenue & Arthur F Brady Drive/Shaw's Plaza Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	26%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

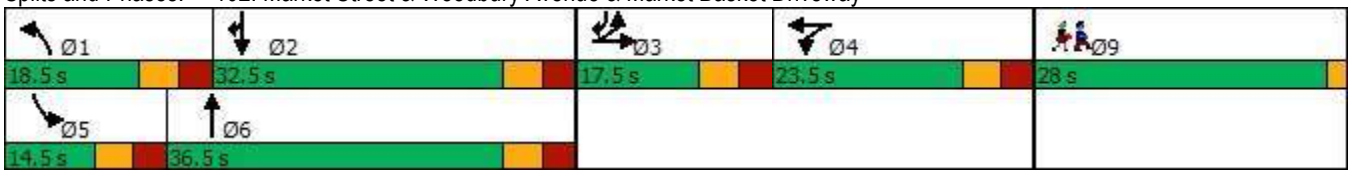
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	168	48	74	176	74	8	165	665	137	9	610	321
Future Volume (vph)	168	48	74	176	74	8	165	665	137	9	610	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Storage Length (ft)	275		0	0		0	300		0	275		275
Storage Lanes	2		0	1		0	1		0	1		0
Taper Length (ft)	100			25			100			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		707			198			600			782	
Travel Time (s)		16.1			5.4			13.6			17.8	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Detector Phase	3	3		4	4		1	6		5	2	2 3
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.5	12.5		12.5	12.5		12.5	16.5		12.5	16.5	
Total Split (s)	17.5	17.5		23.5	23.5		18.5	36.5		14.5	32.5	
Total Split (%)	14.6%	14.6%		19.6%	19.6%		15.4%	30.4%		12.1%	27.1%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 90.8
Natural Cycle: 105
Control Type: Actuated-Uncoordinated

Splits and Phases: 102: Market Street & Woodbury Avenue & Market Basket Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	23%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	44	212	36	65	79	243	575	23	78	689	66
Future Volume (vph)	67	44	212	36	65	79	243	575	23	78	689	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	10	11	11
Total Lost time (s)		6.0	6.0		5.5	5.5	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1748	1531		1742	1507	1728	3435		1668	3410	
Flt Permitted		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1748	1531		1742	1507	1728	3435		1668	3410	
Peak-hour factor, PHF	0.84	0.84	0.84	0.81	0.81	0.81	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	80	52	252	44	80	98	256	605	24	82	725	69
RTOR Reduction (vph)	0	0	196	0	0	74	0	2	0	0	6	0
Lane Group Flow (vph)	0	132	56	0	124	24	256	627	0	82	788	0
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	3 1	4	4	4 5	1	6		5	2	
Permitted Phases												
Actuated Green, G (s)		7.3	18.8		10.8	20.8	11.5	26.2		10.0	24.7	
Effective Green, g (s)		7.3	18.8		10.8	20.8	11.5	26.2		10.0	24.7	
Actuated g/C Ratio		0.09	0.22		0.13	0.25	0.14	0.31		0.12	0.29	
Clearance Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		152	343		224	373	236	1072		198	1003	
v/s Ratio Prot		c0.08	0.04		c0.07	0.02	c0.15	0.18		0.05	c0.23	
v/s Ratio Perm												
v/c Ratio		0.87	0.16		0.55	0.07	1.08	0.58		0.41	0.79	
Uniform Delay, d1		37.8	26.2		34.3	24.1	36.2	24.3		34.2	27.2	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		37.2	0.2		2.9	0.1	83.0	0.8		1.4	4.1	
Delay (s)		75.1	26.5		37.2	24.2	119.2	25.1		35.6	31.3	
Level of Service		E	C		D	C	F	C		D	C	
Approach Delay (s)		43.2			31.5			52.3			31.7	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	41.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	83.9	Sum of lost time (s)	25.5
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	168	48	74	176	74	8	165	665	137	9	610	321
Future Volume (vph)	168	48	74	176	74	8	165	665	137	9	610	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.91		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3268	1612		1954	2028		1728	3367		1728	3455	1546
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3268	1612		1954	2028		1728	3367		1728	3455	1546
Peak-hour factor, PHF	0.93	0.93	0.93	0.86	0.86	0.86	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	181	52	80	205	86	9	179	723	149	10	656	345
RTOR Reduction (vph)	0	46	0	0	3	0	0	11	0	0	0	184
Lane Group Flow (vph)	181	86	0	205	92	0	179	861	0	10	656	161
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Actuated Green, G (s)	10.0	10.0		14.4	14.4		12.3	40.1		1.2	29.0	45.5
Effective Green, g (s)	10.0	10.0		14.4	14.4		12.3	40.1		1.2	29.0	45.5
Actuated g/C Ratio	0.10	0.10		0.15	0.15		0.13	0.41		0.01	0.30	0.47
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	335	165		288	299		217	1384		21	1027	721
v/s Ratio Prot	c0.06	0.05		c0.10	0.05		c0.10	c0.26		0.01	0.19	0.10
v/s Ratio Perm												
v/c Ratio	0.54	0.52		0.71	0.31		0.82	0.62		0.48	0.64	0.22
Uniform Delay, d1	41.6	41.5		39.6	37.1		41.5	22.7		47.8	29.7	15.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.8	3.0		8.1	0.6		21.8	0.9		16.0	1.3	0.2
Delay (s)	43.3	44.5		47.6	37.7		63.3	23.6		63.9	31.0	15.6
Level of Service	D	D		D	D		E	C		E	C	B
Approach Delay (s)		43.8			44.5			30.4			26.1	
Approach LOS		D			D			C			C	

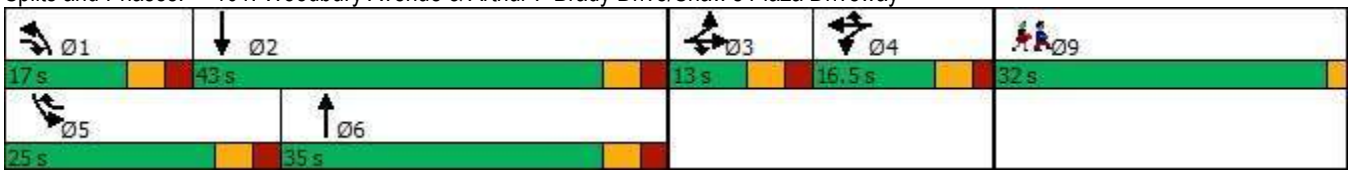
Intersection Summary			
HCM 2000 Control Delay	31.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	97.5	Sum of lost time (s)	28.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	87	252	70	68	140	218	660	36	125	752	87
Future Volume (vph)	103	87	252	70	68	140	218	660	36	125	752	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	10	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		100	0		0	300		0	250		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		432			159			782			407	
Travel Time (s)		11.8			4.3			17.8			9.3	
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	3 1	4	4	4 5	1	6		5	2	
Permitted Phases												
Detector Phase	3	3	3 1	4	4	4 5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.0	12.0		11.5	11.5		12.0	16.0		12.0	16.0	
Total Split (s)	13.0	13.0		16.5	16.5		17.0	35.0		25.0	43.0	
Total Split (%)	10.7%	10.7%		13.6%	13.6%		14.0%	28.8%		20.6%	35.4%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.5	2.5		2.0	2.0		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		Min	Min	

Intersection Summary

Area Type: Other
Cycle Length: 121.5
Actuated Cycle Length: 88.5
Natural Cycle: 145
Control Type: Actuated-Uncoordinated

Splits and Phases: 101: Woodbury Avenue & Arthur F Brady Drive/Shaw's Plaza Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	26%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

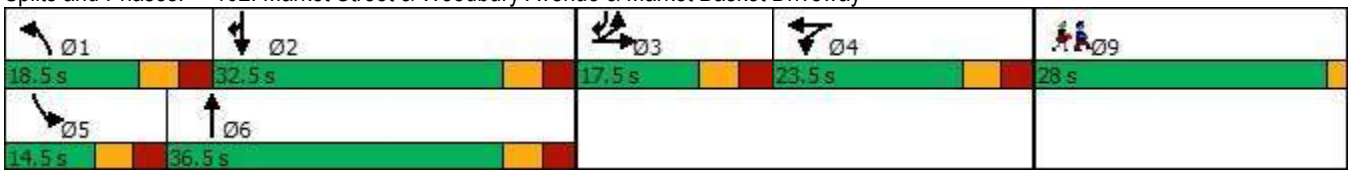
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	58	56	164	79	14	106	720	167	17	690	360
Future Volume (vph)	180	58	56	164	79	14	106	720	167	17	690	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Storage Length (ft)	275		0	0		0	300		0	275		275
Storage Lanes	2		0	1		0	1		0	1		0
Taper Length (ft)	100			25			100			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		707			198			600			782	
Travel Time (s)		16.1			5.4			13.6			17.8	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Detector Phase	3	3		4	4		1	6		5	2	2 3
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.5	12.5		12.5	12.5		12.5	16.5		12.5	16.5	
Total Split (s)	17.5	17.5		23.5	23.5		18.5	36.5		14.5	32.5	
Total Split (%)	14.6%	14.6%		19.6%	19.6%		15.4%	30.4%		12.1%	27.1%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 89.4
Natural Cycle: 105
Control Type: Actuated-Uncoordinated

Splits and Phases: 102: Market Street & Woodbury Avenue & Market Basket Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	23%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	87	252	70	68	140	218	660	36	125	752	87
Future Volume (vph)	103	87	252	70	68	140	218	660	36	125	752	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	10	11	11
Total Lost time (s)		6.0	6.0		5.5	5.5	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1788	1561		1712	1492	1728	3428		1668	3401	
Flt Permitted		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1788	1561		1712	1492	1728	3428		1668	3401	
Peak-hour factor, PHF	0.95	0.95	0.95	0.86	0.86	0.86	0.97	0.97	0.97	0.90	0.90	0.90
Adj. Flow (vph)	108	92	265	81	79	163	225	680	37	139	836	97
RTOR Reduction (vph)	0	0	182	0	0	119	0	3	0	0	7	0
Lane Group Flow (vph)	0	200	83	0	160	44	225	714	0	139	926	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	3 1	4	4	4 5	1	6		5	2	
Permitted Phases												
Actuated Green, G (s)		7.2	18.5		11.3	24.1	11.3	28.3		12.8	29.8	
Effective Green, g (s)		7.2	18.5		11.3	24.1	11.3	28.3		12.8	29.8	
Actuated g/C Ratio		0.08	0.21		0.13	0.27	0.13	0.32		0.14	0.33	
Clearance Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		143	322		216	401	218	1083		238	1132	
v/s Ratio Prot		c0.11	0.05		c0.09	0.03	c0.13	0.21		0.08	c0.27	
v/s Ratio Perm												
v/c Ratio		1.40	0.26		0.74	0.11	1.03	0.66		0.58	0.82	
Uniform Delay, d1		41.1	29.7		37.7	24.6	39.1	26.4		35.9	27.4	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		216.0	0.4		12.8	0.1	69.6	1.5		3.6	4.7	
Delay (s)		257.2	30.2		50.5	24.7	108.7	27.9		39.5	32.1	
Level of Service		F	C		D	C	F	C		D	C	
Approach Delay (s)		127.8			37.5			47.2			33.0	
Approach LOS		F			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	54.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	89.5	Sum of lost time (s)	25.5
Intersection Capacity Utilization	67.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	58	56	164	79	14	106	720	167	17	690	360
Future Volume (vph)	180	58	56	164	79	14	106	720	167	17	690	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.93		1.00	0.98		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3300	1659		1954	2010		1728	3357		1728	3455	1546
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3300	1659		1954	2010		1728	3357		1728	3455	1546
Peak-hour factor, PHF	0.97	0.97	0.97	0.95	0.95	0.95	0.95	0.95	0.95	0.96	0.96	0.96
Adj. Flow (vph)	186	60	58	173	83	15	112	758	176	18	719	375
RTOR Reduction (vph)	0	29	0	0	5	0	0	13	0	0	0	192
Lane Group Flow (vph)	186	89	0	173	93	0	112	921	0	18	719	183
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Actuated Green, G (s)	10.0	10.0		12.8	12.8		10.5	37.6		2.6	29.7	46.2
Effective Green, g (s)	10.0	10.0		12.8	12.8		10.5	37.6		2.6	29.7	46.2
Actuated g/C Ratio	0.11	0.11		0.14	0.14		0.11	0.40		0.03	0.31	0.49
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	348	175		263	271		191	1331		47	1082	753
v/s Ratio Prot	c0.06	0.05		c0.09	0.05		c0.06	c0.27		0.01	0.21	0.12
v/s Ratio Perm												
v/c Ratio	0.53	0.51		0.66	0.34		0.59	0.69		0.38	0.66	0.24
Uniform Delay, d1	40.2	40.1		38.9	37.2		40.1	23.8		45.3	28.2	14.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.6	2.5		5.8	0.8		4.5	1.6		5.1	1.6	0.2
Delay (s)	41.8	42.6		44.8	37.9		44.6	25.4		50.4	29.8	14.3
Level of Service	D	D		D	D		D	C		D	C	B
Approach Delay (s)		42.1			42.3			27.4			24.9	
Approach LOS		D			D			C			C	

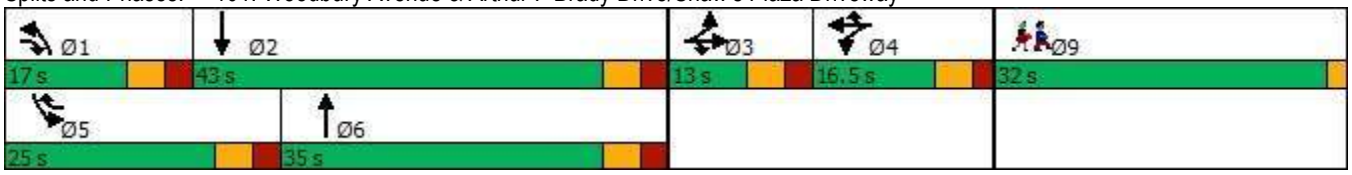
Intersection Summary			
HCM 2000 Control Delay	29.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	94.8	Sum of lost time (s)	28.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	19	99	9	15	33	133	369	3	30	477	44
Future Volume (vph)	54	19	99	9	15	33	133	369	3	30	477	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	10	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		100	0		0	300		0	250		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		432			159			782			407	
Travel Time (s)		9.8			4.3			17.8			9.3	
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	1 3	4	4	4 5	1	6		5	2	
Permitted Phases												
Detector Phase	3	3	1 3	4	4	4 5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.0	12.0		11.5	11.5		12.0	16.0		12.0	16.0	
Total Split (s)	13.0	13.0		16.5	16.5		17.0	35.0		25.0	43.0	
Total Split (%)	10.7%	10.7%		13.6%	13.6%		14.0%	28.8%		20.6%	35.4%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.5	2.5		2.0	2.0		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		Min	Min	

Intersection Summary

Area Type: Other
Cycle Length: 121.5
Actuated Cycle Length: 60.3
Natural Cycle: 85
Control Type: Actuated-Uncoordinated

Splits and Phases: 101: Woodbury Avenue & Arthur F Brady Drive/Shaw's Plaza Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	26%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

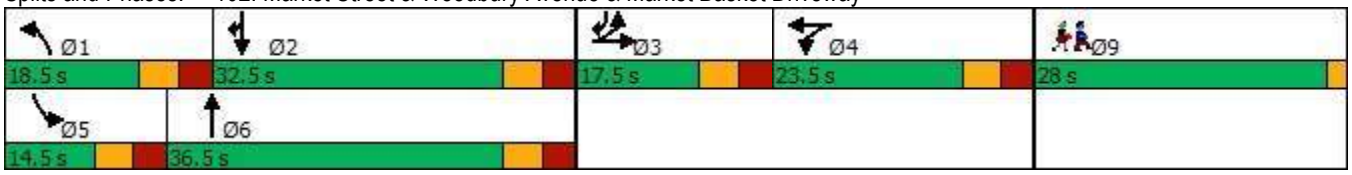
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	31	86	56	28	8	126	406	95	5	363	222
Future Volume (vph)	91	31	86	56	28	8	126	406	95	5	363	222
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Storage Length (ft)	275		0	0		0	300		0	275		275
Storage Lanes	2		0	1		0	1		0	1		0
Taper Length (ft)	100			25			100			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		707			198			600			782	
Travel Time (s)		16.1			5.4			13.6			17.8	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Detector Phase	3	3		4	4		1	6		5	2	2 3
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.5	12.5		12.5	12.5		12.5	16.5		12.5	16.5	
Total Split (s)	17.5	17.5		23.5	23.5		18.5	36.5		14.5	32.5	
Total Split (%)	14.6%	14.6%		19.6%	19.6%		15.4%	30.4%		12.1%	27.1%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 71.1
Natural Cycle: 85
Control Type: Actuated-Uncoordinated

Splits and Phases: 102: Market Street & Woodbury Avenue & Market Basket Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	23%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	19	99	9	15	33	133	369	3	30	477	44
Future Volume (vph)	54	19	99	9	15	33	133	369	3	30	477	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	10	11	11
Total Lost time (s)		6.0	6.0		5.5	5.5	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.96	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1736	1531		1674	1449	1678	3352		1620	3313	
Flt Permitted		0.96	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1736	1531		1674	1449	1678	3352		1620	3313	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.95	0.95	0.95	0.90	0.90	0.90
Adj. Flow (vph)	60	21	110	10	17	37	140	388	3	33	530	49
RTOR Reduction (vph)	0	0	78	0	0	27	0	1	0	0	6	0
Lane Group Flow (vph)	0	81	32	0	27	10	140	390	0	33	573	0
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	1 3	4	4	4 5	1	6		5	2	
Permitted Phases												
Actuated Green, G (s)		7.2	18.4		4.0	16.8	11.2	20.4		7.3	16.5	
Effective Green, g (s)		7.2	18.4		4.0	16.8	11.2	20.4		7.3	16.5	
Actuated g/C Ratio		0.12	0.29		0.06	0.27	0.18	0.33		0.12	0.26	
Clearance Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		200	451		107	390	301	1095		189	876	
v/s Ratio Prot		c0.05	0.02		c0.02	0.01	c0.08	c0.12		0.02	c0.17	
v/s Ratio Perm												
v/c Ratio		0.41	0.07		0.25	0.03	0.47	0.36		0.17	0.65	
Uniform Delay, d1		25.6	15.8		27.8	16.8	22.9	16.0		24.8	20.4	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.3	0.1		1.2	0.0	1.1	0.2		0.4	1.8	
Delay (s)		27.0	15.9		29.0	16.8	24.1	16.2		25.3	22.2	
Level of Service		C	B		C	B	C	B		C	C	
Approach Delay (s)		20.6			22.0			18.3			22.3	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	20.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	62.4	Sum of lost time (s)	25.5
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	31	86	56	28	8	126	406	95	5	363	222
Future Volume (vph)	91	31	86	56	28	8	126	406	95	5	363	222
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.97		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3236	1562		1862	1894		1711	3324		1678	3355	1501
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3236	1562		1862	1894		1711	3324		1678	3355	1501
Peak-hour factor, PHF	0.94	0.94	0.94	0.90	0.90	0.90	0.90	0.90	0.90	0.97	0.97	0.97
Adj. Flow (vph)	97	33	91	62	31	9	140	451	106	5	374	229
RTOR Reduction (vph)	0	81	0	0	8	0	0	14	0	0	0	125
Lane Group Flow (vph)	97	43	0	62	32	0	140	543	0	5	374	104
Heavy Vehicles (%)	2%	2%	2%	6%	6%	6%	2%	2%	2%	4%	4%	4%
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Actuated Green, G (s)	8.3	8.3		6.6	6.6		11.6	31.9		0.9	21.2	36.0
Effective Green, g (s)	8.3	8.3		6.6	6.6		11.6	31.9		0.9	21.2	36.0
Actuated g/C Ratio	0.11	0.11		0.08	0.08		0.15	0.40		0.01	0.27	0.46
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	340	164		155	158		251	1343		19	901	684
v/s Ratio Prot	c0.03	0.03		c0.03	0.02		c0.08	c0.16		0.00	0.11	0.07
v/s Ratio Perm												
v/c Ratio	0.29	0.26		0.40	0.20		0.56	0.40		0.26	0.42	0.15
Uniform Delay, d1	32.6	32.5		34.3	33.7		31.3	16.7		38.7	23.7	12.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.5	0.8		1.7	0.6		2.7	0.2		7.3	0.3	0.1
Delay (s)	33.0	33.3		36.0	34.3		33.9	16.9		46.0	24.1	12.6
Level of Service	C	C		D	C		C	B		D	C	B
Approach Delay (s)		33.2			35.3			20.4			19.9	
Approach LOS		C			D			C			B	

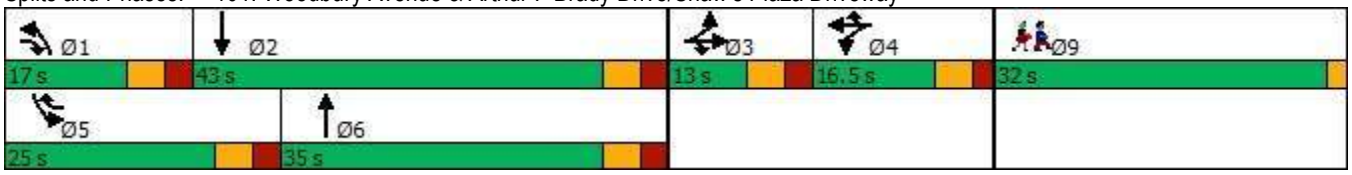
Intersection Summary			
HCM 2000 Control Delay	22.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	78.9	Sum of lost time (s)	28.0
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	45	216	37	66	81	248	623	23	80	747	67
Future Volume (vph)	68	45	216	37	66	81	248	623	23	80	747	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	10	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		100	0		0	300		0	250		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		432			159			782			407	
Travel Time (s)		9.8			4.3			17.8			9.3	
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	3 1	4	4	4 5	1	6		5	2	
Permitted Phases												
Detector Phase	3	3	3 1	4	4	4 5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.0	12.0		11.5	11.5		12.0	16.0		12.0	16.0	
Total Split (s)	13.0	13.0		16.5	16.5		17.0	35.0		25.0	43.0	
Total Split (%)	10.7%	10.7%		13.6%	13.6%		14.0%	28.8%		20.6%	35.4%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.5	2.5		2.0	2.0		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		Min	Min	

Intersection Summary

Area Type: Other
Cycle Length: 121.5
Actuated Cycle Length: 84.7
Natural Cycle: 125
Control Type: Actuated-Uncoordinated

Splits and Phases: 101: Woodbury Avenue & Arthur F Brady Drive/Shaw's Plaza Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	26%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

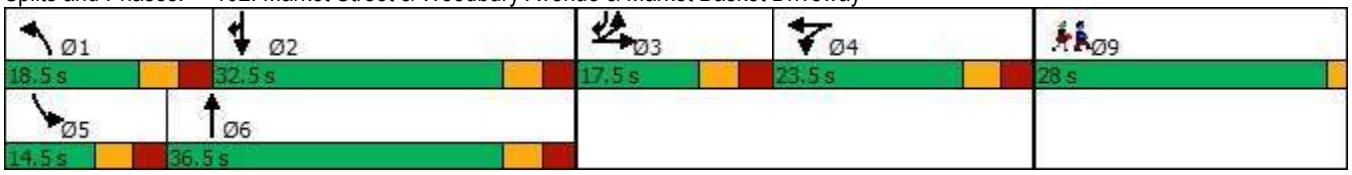
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	187	49	75	180	75	8	168	699	140	9	641	352
Future Volume (vph)	187	49	75	180	75	8	168	699	140	9	641	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Storage Length (ft)	275		0	0		0	300		0	275		275
Storage Lanes	2		0	1		0	1		0	1		0
Taper Length (ft)	100			25			100			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		707			198			600			782	
Travel Time (s)		16.1			5.4			13.6			17.8	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Detector Phase	3	3		4	4		1	6		5	2	2 3
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.5	12.5		12.5	12.5		12.5	16.5		12.5	16.5	
Total Split (s)	17.5	17.5		23.5	23.5		18.5	36.5		14.5	32.5	
Total Split (%)	14.6%	14.6%		19.6%	19.6%		15.4%	30.4%		12.1%	27.1%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 91.9
Natural Cycle: 105
Control Type: Actuated-Uncoordinated

Splits and Phases: 102: Market Street & Woodbury Avenue & Market Basket Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	23%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	45	216	37	66	81	248	623	23	80	747	67
Future Volume (vph)	68	45	216	37	66	81	248	623	23	80	747	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	10	11	11
Total Lost time (s)		6.0	6.0		5.5	5.5	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1748	1531		1742	1507	1728	3437		1668	3412	
Flt Permitted		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1748	1531		1742	1507	1728	3437		1668	3412	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	76	50	240	41	73	90	261	656	24	84	786	71
RTOR Reduction (vph)	0	0	188	0	0	68	0	2	0	0	6	0
Lane Group Flow (vph)	0	126	52	0	114	22	261	678	0	84	851	0
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	3 1	4	4	4 5	1	6		5	2	
Permitted Phases												
Actuated Green, G (s)		7.3	18.7		10.4	20.6	11.4	27.9		10.2	26.7	
Effective Green, g (s)		7.3	18.7		10.4	20.6	11.4	27.9		10.2	26.7	
Actuated g/C Ratio		0.09	0.22		0.12	0.24	0.13	0.33		0.12	0.31	
Clearance Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		149	334		211	363	230	1121		198	1065	
v/s Ratio Prot		c0.07	0.03		c0.07	0.01	c0.15	0.20		0.05	c0.25	
v/s Ratio Perm												
v/c Ratio		0.85	0.16		0.54	0.06	1.13	0.60		0.42	0.80	
Uniform Delay, d1		38.5	27.0		35.3	25.0	37.0	24.2		34.9	26.9	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		33.3	0.2		2.8	0.1	100.4	0.9		1.5	4.3	
Delay (s)		71.8	27.2		38.1	25.1	137.5	25.1		36.4	31.2	
Level of Service		E	C		D	C	F	C		D	C	
Approach Delay (s)		42.6			32.4			56.3			31.7	
Approach LOS		D			C			E			C	

Intersection Summary			
HCM 2000 Control Delay	42.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	85.5	Sum of lost time (s)	25.5
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	187	49	75	180	75	8	168	699	140	9	641	352
Future Volume (vph)	187	49	75	180	75	8	168	699	140	9	641	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.91		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3268	1612		1954	2027		1728	3369		1728	3455	1546
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3268	1612		1954	2027		1728	3369		1728	3455	1546
Peak-hour factor, PHF	0.93	0.93	0.93	0.90	0.90	0.90	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	201	53	81	200	83	9	183	760	152	10	689	378
RTOR Reduction (vph)	0	45	0	0	3	0	0	11	0	0	0	199
Lane Group Flow (vph)	201	89	0	200	89	0	183	901	0	10	689	179
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Actuated Green, G (s)	10.2	10.2		14.2	14.2		12.3	41.1		1.2	30.0	46.7
Effective Green, g (s)	10.2	10.2		14.2	14.2		12.3	41.1		1.2	30.0	46.7
Actuated g/C Ratio	0.10	0.10		0.14	0.14		0.12	0.42		0.01	0.30	0.47
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	338	166		281	291		215	1404		21	1051	732
v/s Ratio Prot	c0.06	0.06		c0.10	0.04		c0.11	c0.27		0.01	0.20	0.12
v/s Ratio Perm												
v/c Ratio	0.59	0.54		0.71	0.30		0.85	0.64		0.48	0.66	0.24
Uniform Delay, d1	42.2	42.0		40.2	37.8		42.3	22.9		48.4	29.8	15.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.8	3.3		8.2	0.6		26.2	1.0		16.0	1.5	0.2
Delay (s)	45.0	45.3		48.5	38.4		68.4	23.9		64.4	31.3	15.6
Level of Service	D	D		D	D		E	C		E	C	B
Approach Delay (s)		45.1			45.3			31.3			26.1	
Approach LOS		D			D			C			C	

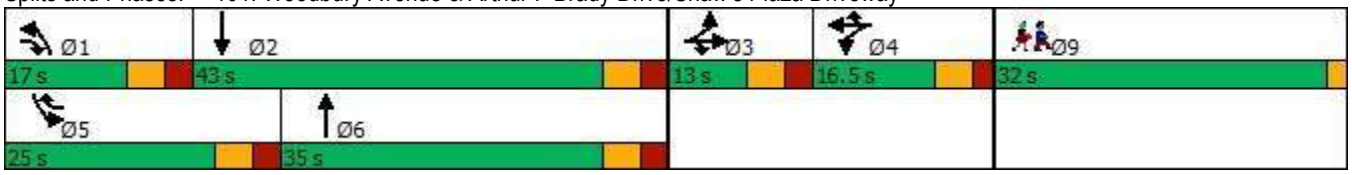
Intersection Summary			
HCM 2000 Control Delay	32.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	98.6	Sum of lost time (s)	28.0
Intersection Capacity Utilization	67.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	89	257	71	69	143	222	699	37	128	818	89
Future Volume (vph)	105	89	257	71	69	143	222	699	37	128	818	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	10	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		100	0		0	300		0	250		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		432			159			782			407	
Travel Time (s)		11.8			4.3			17.8			9.3	
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	3 1	4	4	4 5	1	6		5	2	
Permitted Phases												
Detector Phase	3	3	3 1	4	4	4 5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.0	12.0		11.5	11.5		12.0	16.0		12.0	16.0	
Total Split (s)	13.0	13.0		16.5	16.5		17.0	35.0		25.0	43.0	
Total Split (%)	10.7%	10.7%		13.6%	13.6%		14.0%	28.8%		20.6%	35.4%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.5	2.5		2.0	2.0		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		Min	Min	

Intersection Summary

Area Type: Other
Cycle Length: 121.5
Actuated Cycle Length: 92.7
Natural Cycle: 145
Control Type: Actuated-Uncoordinated

Splits and Phases: 101: Woodbury Avenue & Arthur F Brady Drive/Shaw's Plaza Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	26%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

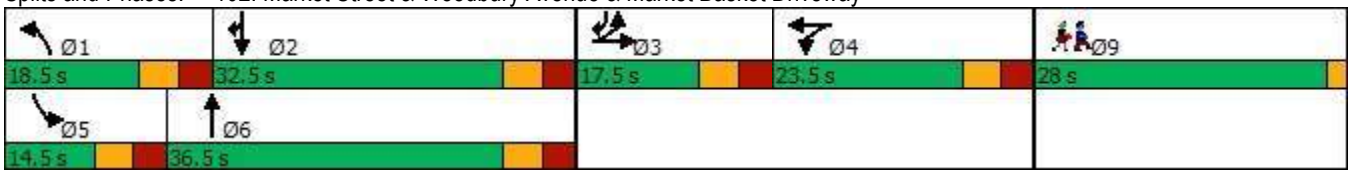
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	59	57	167	81	14	108	749	170	17	726	396
Future Volume (vph)	195	59	57	167	81	14	108	749	170	17	726	396
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Storage Length (ft)	275		0	0		0	300		0	275		275
Storage Lanes	2		0	1		0	1		0	1		0
Taper Length (ft)	100			25			100			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		707			198			600			782	
Travel Time (s)		16.1			5.4			13.6			17.8	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Detector Phase	3	3		4	4		1	6		5	2	2 3
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.5	12.5		12.5	12.5		12.5	16.5		12.5	16.5	
Total Split (s)	17.5	17.5		23.5	23.5		18.5	36.5		14.5	32.5	
Total Split (%)	14.6%	14.6%		19.6%	19.6%		15.4%	30.4%		12.1%	27.1%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 91
Natural Cycle: 105
Control Type: Actuated-Uncoordinated

Splits and Phases: 102: Market Street & Woodbury Avenue & Market Basket Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	23%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	89	257	71	69	143	222	699	37	128	818	89
Future Volume (vph)	105	89	257	71	69	143	222	699	37	128	818	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	10	11	11
Total Lost time (s)		6.0	6.0		5.5	5.5	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1788	1561		1712	1492	1728	3429		1668	3404	
Flt Permitted		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1788	1561		1712	1492	1728	3429		1668	3404	
Peak-hour factor, PHF	0.95	0.95	0.95	0.90	0.90	0.90	0.97	0.97	0.97	0.90	0.90	0.90
Adj. Flow (vph)	111	94	271	79	77	159	229	721	38	142	909	99
RTOR Reduction (vph)	0	0	185	0	0	118	0	3	0	0	6	0
Lane Group Flow (vph)	0	205	86	0	156	41	229	756	0	142	1002	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	3 1	4	4	4 5	1	6		5	2	
Permitted Phases												
Actuated Green, G (s)		7.1	18.3		11.2	24.1	11.2	32.5		12.9	34.2	
Effective Green, g (s)		7.1	18.3		11.2	24.1	11.2	32.5		12.9	34.2	
Actuated g/C Ratio		0.08	0.20		0.12	0.26	0.12	0.35		0.14	0.36	
Clearance Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		135	304		204	383	206	1188		229	1241	
v/s Ratio Prot		c0.11	0.06		c0.09	0.03	c0.13	0.22		0.09	c0.29	
v/s Ratio Perm												
v/c Ratio		1.52	0.28		0.76	0.11	1.11	0.64		0.62	0.81	
Uniform Delay, d1		43.4	32.2		40.0	26.6	41.3	25.7		38.1	26.8	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		267.4	0.5		15.6	0.1	95.8	1.1		5.1	3.9	
Delay (s)		310.8	32.7		55.6	26.7	137.1	26.8		43.3	30.8	
Level of Service		F	C		E	C	F	C		D	C	
Approach Delay (s)		152.4			41.0			52.4			32.3	
Approach LOS		F			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	59.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	93.8	Sum of lost time (s)	25.5
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	59	57	167	81	14	108	749	170	17	726	396
Future Volume (vph)	195	59	57	167	81	14	108	749	170	17	726	396
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.93		1.00	0.98		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3300	1659		1954	2010		1728	3359		1728	3455	1546
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3300	1659		1954	2010		1728	3359		1728	3455	1546
Peak-hour factor, PHF	0.97	0.97	0.97	0.95	0.95	0.95	0.95	0.95	0.95	0.96	0.96	0.96
Adj. Flow (vph)	201	61	59	176	85	15	114	788	179	18	756	412
RTOR Reduction (vph)	0	29	0	0	5	0	0	13	0	0	0	209
Lane Group Flow (vph)	201	91	0	176	95	0	114	954	0	18	756	204
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Actuated Green, G (s)	10.2	10.2		12.9	12.9		10.6	38.9		2.6	30.9	47.6
Effective Green, g (s)	10.2	10.2		12.9	12.9		10.6	38.9		2.6	30.9	47.6
Actuated g/C Ratio	0.11	0.11		0.13	0.13		0.11	0.40		0.03	0.32	0.49
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	349	175		261	268		190	1355		46	1107	763
v/s Ratio Prot	c0.06	0.06		c0.09	0.05		c0.07	c0.28		0.01	0.22	0.13
v/s Ratio Perm												
v/c Ratio	0.58	0.52		0.67	0.35		0.60	0.70		0.39	0.68	0.27
Uniform Delay, d1	41.0	40.8		39.8	38.0		40.9	24.0		46.1	28.5	14.2
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.3	2.8		6.7	0.8		5.0	1.7		5.4	1.8	0.2
Delay (s)	43.3	43.6		46.5	38.8		45.9	25.6		51.5	30.2	14.4
Level of Service	D	D		D	D		D	C		D	C	B
Approach Delay (s)		43.4			43.7			27.8			25.1	
Approach LOS		D			D			C			C	

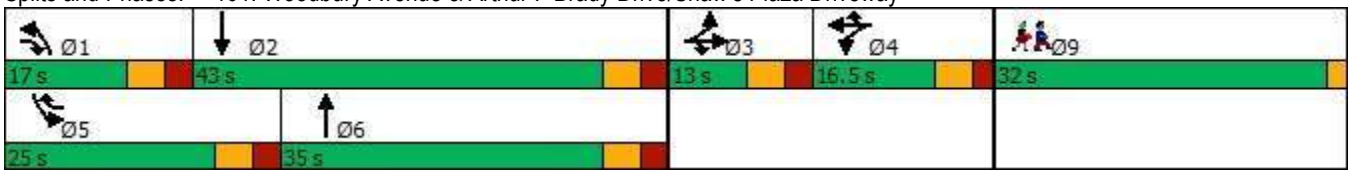
Intersection Summary			
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	96.4	Sum of lost time (s)	28.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	21	109	10	17	36	146	408	3	33	518	48
Future Volume (vph)	60	21	109	10	17	36	146	408	3	33	518	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	10	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		100	0		0	300		0	250		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		432			159			782			407	
Travel Time (s)		9.8			4.3			17.8			9.3	
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	1 3	4	4	4 5	1	6		5	2	
Permitted Phases												
Detector Phase	3	3	1 3	4	4	4 5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.0	12.0		11.5	11.5		12.0	16.0		12.0	16.0	
Total Split (s)	13.0	13.0		16.5	16.5		17.0	35.0		25.0	43.0	
Total Split (%)	10.7%	10.7%		13.6%	13.6%		14.0%	28.8%		20.6%	35.4%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.5	2.5		2.0	2.0		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		Min	Min	

Intersection Summary

Area Type: Other
Cycle Length: 121.5
Actuated Cycle Length: 62
Natural Cycle: 85
Control Type: Actuated-Uncoordinated

Splits and Phases: 101: Woodbury Avenue & Arthur F Brady Drive/Shaw's Plaza Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	26%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

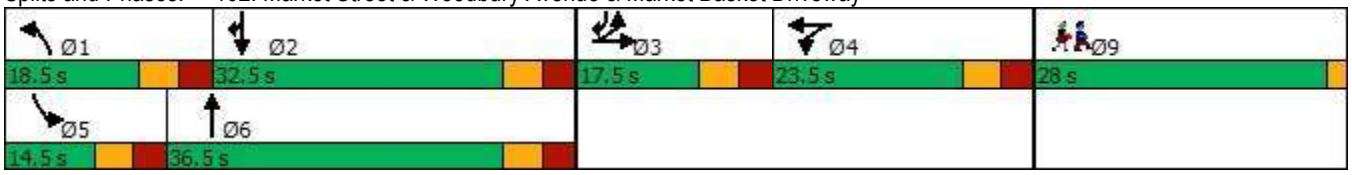
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	34	95	62	30	9	140	448	105	6	398	241
Future Volume (vph)	100	34	95	62	30	9	140	448	105	6	398	241
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Storage Length (ft)	275		0	0		0	300		0	275		275
Storage Lanes	2		0	1		0	1		0	1		0
Taper Length (ft)	100			25			100			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		707			198			600			782	
Travel Time (s)		16.1			5.4			13.6			17.8	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Detector Phase	3	3		4	4		1	6		5	2	2 3
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.5	12.5		12.5	12.5		12.5	16.5		12.5	16.5	
Total Split (s)	17.5	17.5		23.5	23.5		18.5	36.5		14.5	32.5	
Total Split (%)	14.6%	14.6%		19.6%	19.6%		15.4%	30.4%		12.1%	27.1%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 73.3
Natural Cycle: 85
Control Type: Actuated-Uncoordinated

Splits and Phases: 102: Market Street & Woodbury Avenue & Market Basket Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	23%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	21	109	10	17	36	146	408	3	33	518	48
Future Volume (vph)	60	21	109	10	17	36	146	408	3	33	518	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	10	11	11
Total Lost time (s)		6.0	6.0		5.5	5.5	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.96	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1736	1531		1674	1449	1678	3352		1620	3313	
Flt Permitted		0.96	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1736	1531		1674	1449	1678	3352		1620	3313	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.95	0.95	0.95	0.90	0.90	0.90
Adj. Flow (vph)	67	23	121	11	19	40	154	429	3	37	576	53
RTOR Reduction (vph)	0	0	86	0	0	29	0	1	0	0	6	0
Lane Group Flow (vph)	0	90	35	0	30	11	154	431	0	37	623	0
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	1 3	4	4	4 5	1	6		5	2	
Permitted Phases												
Actuated Green, G (s)		7.2	18.5		4.1	17.1	11.3	21.7		7.5	17.9	
Effective Green, g (s)		7.2	18.5		4.1	17.1	11.3	21.7		7.5	17.9	
Actuated g/C Ratio		0.11	0.29		0.06	0.27	0.18	0.34		0.12	0.28	
Clearance Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		195	442		107	387	296	1136		189	926	
v/s Ratio Prot		c0.05	0.02		c0.02	0.01	c0.09	c0.13		0.02	c0.19	
v/s Ratio Perm												
v/c Ratio		0.46	0.08		0.28	0.03	0.52	0.38		0.20	0.67	
Uniform Delay, d1		26.6	16.6		28.5	17.3	23.9	16.0		25.5	20.5	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.7	0.1		1.4	0.0	1.6	0.2		0.5	1.9	
Delay (s)		28.3	16.6		30.0	17.3	25.5	16.3		26.0	22.4	
Level of Service		C	B		C	B	C	B		C	C	
Approach Delay (s)		21.6			22.8			18.7			22.6	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	21.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	64.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	34	95	62	30	9	140	448	105	6	398	241
Future Volume (vph)	100	34	95	62	30	9	140	448	105	6	398	241
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.97		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3236	1561		1862	1891		1711	3324		1678	3355	1501
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3236	1561		1862	1891		1711	3324		1678	3355	1501
Peak-hour factor, PHF	0.94	0.94	0.94	0.90	0.90	0.90	0.90	0.90	0.90	0.97	0.97	0.97
Adj. Flow (vph)	106	36	101	69	33	10	156	498	117	6	410	248
RTOR Reduction (vph)	0	83	0	0	9	0	0	13	0	0	0	135
Lane Group Flow (vph)	106	54	0	69	34	0	156	602	0	6	410	113
Heavy Vehicles (%)	2%	2%	2%	6%	6%	6%	2%	2%	2%	4%	4%	4%
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Actuated Green, G (s)	8.5	8.5		6.9	6.9		12.5	33.5		0.9	21.9	36.9
Effective Green, g (s)	8.5	8.5		6.9	6.9		12.5	33.5		0.9	21.9	36.9
Actuated g/C Ratio	0.10	0.10		0.09	0.09		0.15	0.41		0.01	0.27	0.46
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	339	163		158	161		264	1374		18	907	683
v/s Ratio Prot	0.03	c0.03		c0.04	0.02		c0.09	c0.18		0.00	0.12	0.08
v/s Ratio Perm												
v/c Ratio	0.31	0.33		0.44	0.21		0.59	0.44		0.33	0.45	0.17
Uniform Delay, d1	33.5	33.6		35.2	34.5		31.9	17.0		39.8	24.6	13.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.5	1.2		1.9	0.7		3.5	0.2		10.6	0.4	0.1
Delay (s)	34.1	34.8		37.1	35.2		35.4	17.2		50.4	24.9	13.1
Level of Service	C	C		D	D		D	B		D	C	B
Approach Delay (s)		34.5			36.4			20.9			20.7	
Approach LOS		C			D			C			C	

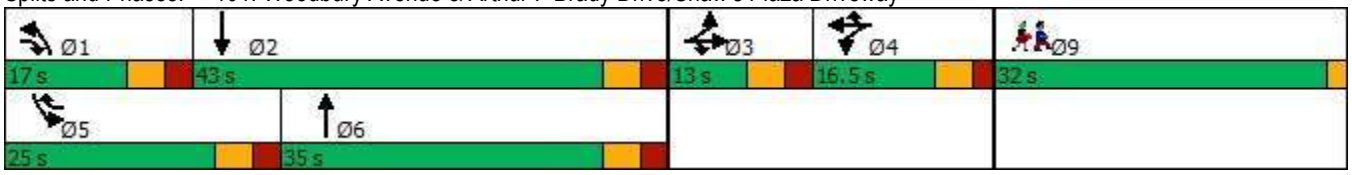
Intersection Summary			
HCM 2000 Control Delay	23.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	81.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	50	239	41	73	89	274	684	26	88	820	74
Future Volume (vph)	75	50	239	41	73	89	274	684	26	88	820	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	10	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		100	0		0	300		0	250		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		432			159			782			407	
Travel Time (s)		9.8			4.3			17.8			9.3	
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	3 1	4	4	4 5	1	6		5	2	
Permitted Phases												
Detector Phase	3	3	3 1	4	4	4 5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.0	12.0		11.5	11.5		12.0	16.0		12.0	16.0	
Total Split (s)	13.0	13.0		16.5	16.5		17.0	35.0		25.0	43.0	
Total Split (%)	10.7%	10.7%		13.6%	13.6%		14.0%	28.8%		20.6%	35.4%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.5	2.5		2.0	2.0		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		Min	Min	

Intersection Summary

Area Type: Other
Cycle Length: 121.5
Actuated Cycle Length: 88.5
Natural Cycle: 135
Control Type: Actuated-Uncoordinated

Splits and Phases: 101: Woodbury Avenue & Arthur F Brady Drive/Shaw's Plaza Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	26%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

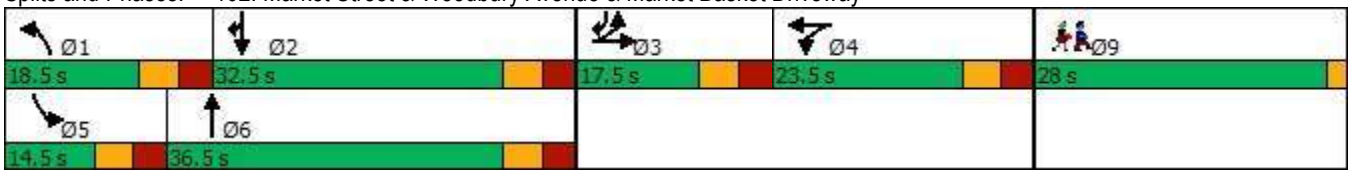
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	54	83	198	83	9	186	770	154	10	706	387
Future Volume (vph)	205	54	83	198	83	9	186	770	154	10	706	387
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Storage Length (ft)	275		0	0		0	300		0	275		275
Storage Lanes	2		0	1		0	1		0	1		0
Taper Length (ft)	100			25			100			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		707			198			600			782	
Travel Time (s)		16.1			5.4			13.6			17.8	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Detector Phase	3	3		4	4		1	6		5	2	2 3
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.5	12.5		12.5	12.5		12.5	16.5		12.5	16.5	
Total Split (s)	17.5	17.5		23.5	23.5		18.5	36.5		14.5	32.5	
Total Split (%)	14.6%	14.6%		19.6%	19.6%		15.4%	30.4%		12.1%	27.1%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 94.9
Natural Cycle: 115
Control Type: Actuated-Uncoordinated

Splits and Phases: 102: Market Street & Woodbury Avenue & Market Basket Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	23%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	50	239	41	73	89	274	684	26	88	820	74
Future Volume (vph)	75	50	239	41	73	89	274	684	26	88	820	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	10	11	11
Total Lost time (s)		6.0	6.0		5.5	5.5	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1748	1531		1742	1507	1728	3436		1668	3412	
Flt Permitted		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1748	1531		1742	1507	1728	3436		1668	3412	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	56	266	46	81	99	288	720	27	93	863	78
RTOR Reduction (vph)	0	0	211	0	0	75	0	2	0	0	5	0
Lane Group Flow (vph)	0	139	55	0	127	24	288	745	0	93	936	0
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	3 1	4	4	4 5	1	6		5	2	
Permitted Phases												
Actuated Green, G (s)		7.2	18.5		10.8	21.5	11.3	30.8		10.7	30.2	
Effective Green, g (s)		7.2	18.5		10.8	21.5	11.3	30.8		10.7	30.2	
Actuated g/C Ratio		0.08	0.21		0.12	0.24	0.13	0.34		0.12	0.34	
Clearance Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		140	316		210	362	218	1183		199	1152	
v/s Ratio Prot		c0.08	0.04		c0.07	0.02	c0.17	0.22		0.06	c0.27	
v/s Ratio Perm												
v/c Ratio		0.99	0.17		0.60	0.07	1.32	0.63		0.47	0.81	
Uniform Delay, d1		41.1	29.2		37.3	26.2	39.1	24.5		36.7	27.0	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		73.6	0.3		4.9	0.1	172.9	1.1		1.7	4.5	
Delay (s)		114.7	29.4		42.1	26.3	211.9	25.6		38.4	31.5	
Level of Service		F	C		D	C	F	C		D	C	
Approach Delay (s)		58.7			35.2			77.4			32.1	
Approach LOS		E			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	53.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	89.4	Sum of lost time (s)	25.5
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

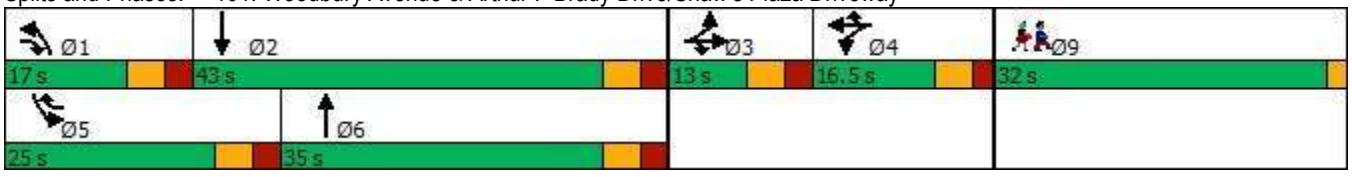
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	54	83	198	83	9	186	770	154	10	706	387
Future Volume (vph)	205	54	83	198	83	9	186	770	154	10	706	387
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.91		1.00	0.99		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3268	1612		1954	2027		1728	3369		1728	3455	1546
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3268	1612		1954	2027		1728	3369		1728	3455	1546
Peak-hour factor, PHF	0.93	0.93	0.93	0.90	0.90	0.90	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	220	58	89	220	92	10	202	837	167	11	759	416
RTOR Reduction (vph)	0	46	0	0	3	0	0	11	0	0	0	216
Lane Group Flow (vph)	220	101	0	220	99	0	202	993	0	11	759	200
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Actuated Green, G (s)	10.6	10.6		15.1	15.1		12.2	42.9		1.2	31.9	49.0
Effective Green, g (s)	10.6	10.6		15.1	15.1		12.2	42.9		1.2	31.9	49.0
Actuated g/C Ratio	0.10	0.10		0.15	0.15		0.12	0.42		0.01	0.31	0.48
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	340	167		289	300		207	1419		20	1082	744
v/s Ratio Prot	c0.07	0.06		c0.11	0.05		c0.12	c0.29		0.01	0.22	0.13
v/s Ratio Perm												
v/c Ratio	0.65	0.61		0.76	0.33		0.98	0.70		0.55	0.70	0.27
Uniform Delay, d1	43.8	43.6		41.6	38.8		44.7	24.2		50.0	30.8	15.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.2	6.1		11.2	0.6		55.1	1.5		28.9	2.1	0.2
Delay (s)	48.0	49.7		52.8	39.5		99.8	25.7		78.9	32.8	15.9
Level of Service	D	D		D	D		F	C		E	C	B
Approach Delay (s)		48.7			48.6			38.1			27.3	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	36.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	101.8	Sum of lost time (s)	28.0
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	98	284	79	77	158	246	770	41	141	898	98
Future Volume (vph)	116	98	284	79	77	158	246	770	41	141	898	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	10	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		100	0		0	300		0	250		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		432			159			782			407	
Travel Time (s)		11.8			4.3			17.8			9.3	
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	3 1	4	4	4 5	1	6		5	2	
Permitted Phases												
Detector Phase	3	3	3 1	4	4	4 5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.0	12.0		11.5	11.5		12.0	16.0		12.0	16.0	
Total Split (s)	13.0	13.0		16.5	16.5		17.0	35.0		25.0	43.0	
Total Split (%)	10.7%	10.7%		13.6%	13.6%		14.0%	28.8%		20.6%	35.4%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.5	2.5		2.0	2.0		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		Min	Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 121.5	
Actuated Cycle Length: 95.9	
Natural Cycle: 145	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 101: Woodbury Avenue & Arthur F Brady Drive/Shaw's Plaza Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	26%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

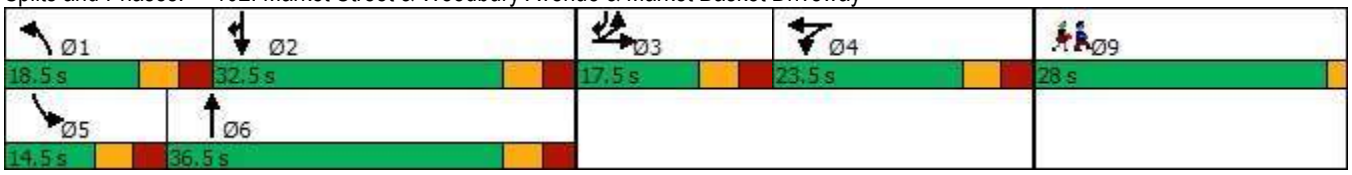
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	214	65	63	185	89	16	119	827	188	19	800	435
Future Volume (vph)	214	65	63	185	89	16	119	827	188	19	800	435
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Storage Length (ft)	275		0	0		0	300		0	275		275
Storage Lanes	2		0	1		0	1		0	1		0
Taper Length (ft)	100			25			100			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		707			198			600			782	
Travel Time (s)		16.1			5.4			13.6			17.8	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Detector Phase	3	3		4	4		1	6		5	2	2 3
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.5	12.5		12.5	12.5		12.5	16.5		12.5	16.5	
Total Split (s)	17.5	17.5		23.5	23.5		18.5	36.5		14.5	32.5	
Total Split (%)	14.6%	14.6%		19.6%	19.6%		15.4%	30.4%		12.1%	27.1%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 92.7
Natural Cycle: 115
Control Type: Actuated-Uncoordinated

Splits and Phases: 102: Market Street & Woodbury Avenue & Market Basket Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	23%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	98	284	79	77	158	246	770	41	141	898	98
Future Volume (vph)	116	98	284	79	77	158	246	770	41	141	898	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	10	11	11
Total Lost time (s)		6.0	6.0		5.5	5.5	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1788	1561		1712	1492	1728	3429		1668	3404	
Flt Permitted		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1788	1561		1712	1492	1728	3429		1668	3404	
Peak-hour factor, PHF	0.95	0.95	0.95	0.90	0.90	0.90	0.97	0.97	0.97	0.90	0.90	0.90
Adj. Flow (vph)	122	103	299	88	86	176	254	794	42	157	998	109
RTOR Reduction (vph)	0	0	188	0	0	131	0	3	0	0	6	0
Lane Group Flow (vph)	0	225	111	0	174	45	254	833	0	157	1101	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	3 1	4	4	4 5	1	6		5	2	
Permitted Phases												
Actuated Green, G (s)		7.1	18.3		11.2	24.8	11.2	35.2		13.6	37.6	
Effective Green, g (s)		7.1	18.3		11.2	24.8	11.2	35.2		13.6	37.6	
Actuated g/C Ratio		0.07	0.19		0.12	0.25	0.12	0.36		0.14	0.39	
Clearance Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		130	293		197	380	198	1240		233	1315	
v/s Ratio Prot		c0.13	0.07		c0.10	0.03	c0.15	0.24		0.09	c0.32	
v/s Ratio Perm												
v/c Ratio		1.73	0.38		0.88	0.12	1.28	0.67		0.67	0.84	
Uniform Delay, d1		45.1	34.5		42.4	27.8	43.0	26.2		39.7	27.1	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		358.9	0.8		33.9	0.1	160.1	1.4		7.5	4.8	
Delay (s)		404.0	35.4		76.3	28.0	203.1	27.6		47.2	31.9	
Level of Service		F	D		E	C	F	C		D	C	
Approach Delay (s)		193.7			52.0			68.5			33.8	
Approach LOS		F			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	73.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	97.3	Sum of lost time (s)	25.5
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	214	65	63	185	89	16	119	827	188	19	800	435
Future Volume (vph)	214	65	63	185	89	16	119	827	188	19	800	435
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.93		1.00	0.98		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3300	1658		1954	2010		1728	3359		1728	3455	1546
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3300	1658		1954	2010		1728	3359		1728	3455	1546
Peak-hour factor, PHF	0.97	0.97	0.97	0.95	0.95	0.95	0.95	0.95	0.95	0.96	0.96	0.96
Adj. Flow (vph)	221	67	65	195	94	17	125	871	198	20	833	453
RTOR Reduction (vph)	0	29	0	0	5	0	0	13	0	0	0	232
Lane Group Flow (vph)	221	103	0	195	106	0	125	1056	0	20	833	221
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Actuated Green, G (s)	10.6	10.6		13.9	13.9		11.0	39.1		2.7	30.8	47.9
Effective Green, g (s)	10.6	10.6		13.9	13.9		11.0	39.1		2.7	30.8	47.9
Actuated g/C Ratio	0.11	0.11		0.14	0.14		0.11	0.40		0.03	0.31	0.49
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	356	178		276	284		193	1337		47	1083	754
v/s Ratio Prot	c0.07	0.06		c0.10	0.05		c0.07	c0.31		0.01	0.24	0.14
v/s Ratio Perm												
v/c Ratio	0.62	0.58		0.71	0.37		0.65	0.79		0.43	0.77	0.29
Uniform Delay, d1	41.9	41.7		40.2	38.2		41.7	25.9		47.0	30.5	15.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.3	4.8		8.0	0.8		7.3	3.2		6.1	3.3	0.2
Delay (s)	45.2	46.5		48.2	39.0		49.0	29.1		53.1	33.8	15.2
Level of Service	D	D		D	D		D	C		D	C	B
Approach Delay (s)		45.7			44.9			31.2			27.7	
Approach LOS		D			D			C			C	

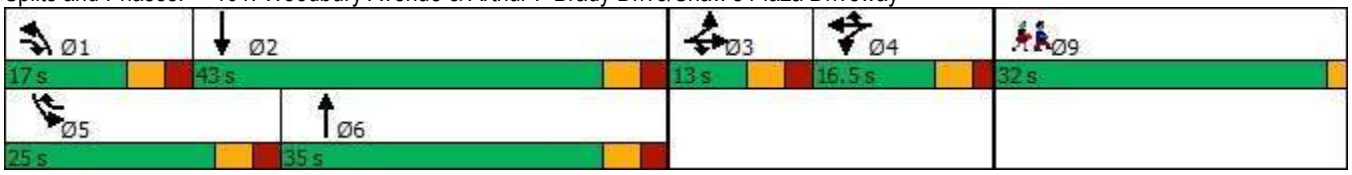
Intersection Summary			
HCM 2000 Control Delay	32.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	98.2	Sum of lost time (s)	28.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	21	99	9	16	36	133	367	3	35	474	44
Future Volume (vph)	54	21	99	9	16	36	133	367	3	35	474	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	10	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		100	0		0	300		0	250		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		432			159			782			407	
Travel Time (s)		9.8			4.3			17.8			9.3	
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	1 3	4	4	4 5	1	6		5	2	
Permitted Phases												
Detector Phase	3	3	1 3	4	4	4 5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.0	12.0		11.5	11.5		12.0	16.0		12.0	16.0	
Total Split (s)	13.0	13.0		16.5	16.5		17.0	35.0		25.0	43.0	
Total Split (%)	10.7%	10.7%		13.6%	13.6%		14.0%	28.8%		20.6%	35.4%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.5	2.5		2.0	2.0		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		Min	Min	

Intersection Summary

Area Type: Other
Cycle Length: 121.5
Actuated Cycle Length: 60.2
Natural Cycle: 85
Control Type: Actuated-Uncoordinated

Splits and Phases: 101: Woodbury Avenue & Arthur F Brady Drive/Shaw's Plaza Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	26%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

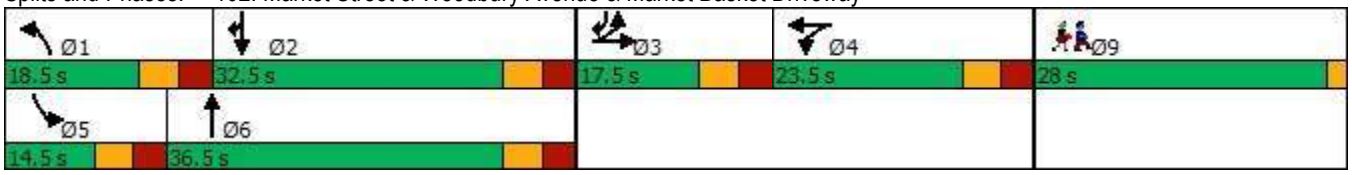
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	35	86	61	31	8	126	404	100	5	360	222
Future Volume (vph)	91	35	86	61	31	8	126	404	100	5	360	222
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Storage Length (ft)	275		0	0		0	300		0	275		275
Storage Lanes	2		0	1		0	1		0	1		0
Taper Length (ft)	100			25			100			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		707			198			600			782	
Travel Time (s)		16.1			5.4			13.6			17.8	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Detector Phase	3	3		4	4		1	6		5	2	2 3
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.5	12.5		12.5	12.5		12.5	16.5		12.5	16.5	
Total Split (s)	17.5	17.5		23.5	23.5		18.5	36.5		14.5	32.5	
Total Split (%)	14.6%	14.6%		19.6%	19.6%		15.4%	30.4%		12.1%	27.1%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 71.6
Natural Cycle: 85
Control Type: Actuated-Uncoordinated

Splits and Phases: 102: Market Street & Woodbury Avenue & Market Basket Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	23%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	21	99	9	16	36	133	367	3	35	474	44
Future Volume (vph)	54	21	99	9	16	36	133	367	3	35	474	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	10	11	11
Total Lost time (s)		6.0	6.0		5.5	5.5	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1738	1531		1675	1449	1678	3352		1620	3313	
Flt Permitted		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1738	1531		1675	1449	1678	3352		1620	3313	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.95	0.95	0.95	0.90	0.90	0.90
Adj. Flow (vph)	60	23	110	10	18	40	140	386	3	39	527	49
RTOR Reduction (vph)	0	0	78	0	0	29	0	1	0	0	6	0
Lane Group Flow (vph)	0	83	32	0	28	11	140	388	0	39	570	0
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	1 3	4	4	4 5	1	6		5	2	
Permitted Phases												
Actuated Green, G (s)		7.2	18.4		4.0	17.0	11.2	20.1		7.5	16.4	
Effective Green, g (s)		7.2	18.4		4.0	17.0	11.2	20.1		7.5	16.4	
Actuated g/C Ratio		0.12	0.30		0.06	0.27	0.18	0.32		0.12	0.26	
Clearance Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		200	452		107	395	301	1081		195	872	
v/s Ratio Prot		c0.05	0.02		c0.02	0.01	c0.08	c0.12		0.02	c0.17	
v/s Ratio Perm												
v/c Ratio		0.41	0.07		0.26	0.03	0.47	0.36		0.20	0.65	
Uniform Delay, d1		25.6	15.8		27.7	16.6	22.9	16.2		24.7	20.4	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.4	0.1		1.3	0.0	1.1	0.2		0.5	1.8	
Delay (s)		27.0	15.9		29.1	16.6	24.0	16.4		25.2	22.2	
Level of Service		C	B		C	B	C	B		C	C	
Approach Delay (s)		20.7			21.7			18.4			22.4	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	62.3	Sum of lost time (s)	25.5
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	35	86	61	31	8	126	404	100	5	360	222
Future Volume (vph)	91	35	86	61	31	8	126	404	100	5	360	222
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.97		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3236	1568		1862	1898		1711	3320		1678	3355	1501
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3236	1568		1862	1898		1711	3320		1678	3355	1501
Peak-hour factor, PHF	0.94	0.94	0.94	0.90	0.90	0.90	0.90	0.90	0.90	0.97	0.97	0.97
Adj. Flow (vph)	97	37	91	68	34	9	140	449	111	5	371	229
RTOR Reduction (vph)	0	72	0	0	8	0	0	14	0	0	0	125
Lane Group Flow (vph)	97	56	0	68	35	0	140	546	0	5	371	104
Heavy Vehicles (%)	2%	2%	2%	6%	6%	6%	2%	2%	2%	4%	4%	4%
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Actuated Green, G (s)	8.4	8.4		6.8	6.8		11.7	32.0		0.9	21.2	36.1
Effective Green, g (s)	8.4	8.4		6.8	6.8		11.7	32.0		0.9	21.2	36.1
Actuated g/C Ratio	0.11	0.11		0.09	0.09		0.15	0.40		0.01	0.27	0.46
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	343	166		159	162		252	1341		19	898	684
v/s Ratio Prot	0.03	c0.04		c0.04	0.02		c0.08	c0.16		0.00	0.11	0.07
v/s Ratio Perm												
v/c Ratio	0.28	0.33		0.43	0.21		0.56	0.41		0.26	0.41	0.15
Uniform Delay, d1	32.6	32.8		34.4	33.7		31.3	16.8		38.8	23.9	12.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.5	1.2		1.8	0.7		2.6	0.2		7.3	0.3	0.1
Delay (s)	33.1	34.0		36.2	34.4		34.0	17.0		46.1	24.2	12.7
Level of Service	C	C		D	C		C	B		D	C	B
Approach Delay (s)		33.6			35.5			20.4			20.0	
Approach LOS		C			D			C			C	

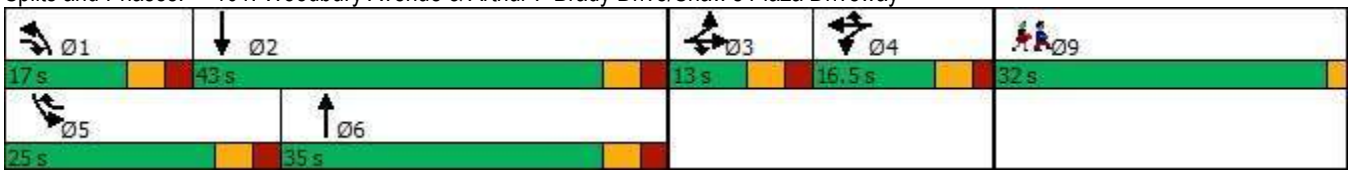
Intersection Summary			
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	79.2	Sum of lost time (s)	28.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	49	216	37	68	88	248	618	23	90	741	67
Future Volume (vph)	68	49	216	37	68	88	248	618	23	90	741	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	10	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		100	0		0	300		0	250		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		432			159			782			407	
Travel Time (s)		9.8			4.3			17.8			9.3	
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	3 1	4	4	4 5	1	6		5	2	
Permitted Phases												
Detector Phase	3	3	3 1	4	4	4 5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.0	12.0		11.5	11.5		12.0	16.0		12.0	16.0	
Total Split (s)	13.0	13.0		16.5	16.5		17.0	35.0		25.0	43.0	
Total Split (%)	10.7%	10.7%		13.6%	13.6%		14.0%	28.8%		20.6%	35.4%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.5	2.5		2.0	2.0		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		Min	Min	

Intersection Summary

Area Type: Other
Cycle Length: 121.5
Actuated Cycle Length: 84.6
Natural Cycle: 115
Control Type: Actuated-Uncoordinated

Splits and Phases: 101: Woodbury Avenue & Arthur F Brady Drive/Shaw's Plaza Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	26%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

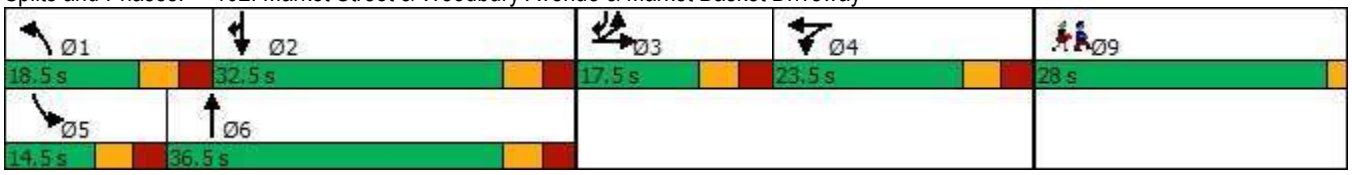
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	187	55	75	193	83	8	168	694	150	9	635	352
Future Volume (vph)	187	55	75	193	83	8	168	694	150	9	635	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Storage Length (ft)	275		0	0		0	300		0	275		275
Storage Lanes	2		0	1		0	1		0	1		0
Taper Length (ft)	100			25			100			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		707			198			600			782	
Travel Time (s)		16.1			5.4			13.6			17.8	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Detector Phase	3	3		4	4		1	6		5	2	2 3
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.5	12.5		12.5	12.5		12.5	16.5		12.5	16.5	
Total Split (s)	17.5	17.5		23.5	23.5		18.5	36.5		14.5	32.5	
Total Split (%)	14.6%	14.6%		19.6%	19.6%		15.4%	30.4%		12.1%	27.1%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 92.4
Natural Cycle: 105
Control Type: Actuated-Uncoordinated

Splits and Phases: 102: Market Street & Woodbury Avenue & Market Basket Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	23%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	49	216	37	68	88	248	618	23	90	741	67
Future Volume (vph)	68	49	216	37	68	88	248	618	23	90	741	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	10	11	11
Total Lost time (s)		6.0	6.0		5.5	5.5	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1750	1531		1743	1507	1728	3437		1668	3412	
Flt Permitted		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1750	1531		1743	1507	1728	3437		1668	3412	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	76	54	240	41	76	98	261	651	24	95	780	71
RTOR Reduction (vph)	0	0	187	0	0	74	0	2	0	0	6	0
Lane Group Flow (vph)	0	130	53	0	117	24	261	673	0	95	845	0
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	3 1	4	4	4 5	1	6		5	2	
Permitted Phases												
Actuated Green, G (s)		7.3	18.7		10.5	21.2	11.4	27.2		10.7	26.5	
Effective Green, g (s)		7.3	18.7		10.5	21.2	11.4	27.2		10.7	26.5	
Actuated g/C Ratio		0.09	0.22		0.12	0.25	0.13	0.32		0.13	0.31	
Clearance Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		149	335		214	374	230	1094		208	1058	
v/s Ratio Prot		c0.07	0.03		c0.07	0.02	c0.15	0.20		0.06	c0.25	
v/s Ratio Perm												
v/c Ratio		0.87	0.16		0.55	0.07	1.13	0.62		0.46	0.80	
Uniform Delay, d1		38.6	27.0		35.2	24.5	37.0	24.7		34.7	27.0	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		39.0	0.2		2.8	0.1	100.4	1.0		1.6	4.3	
Delay (s)		77.6	27.2		38.1	24.6	137.4	25.7		36.2	31.3	
Level of Service		E	C		D	C	F	C		D	C	
Approach Delay (s)		44.9			31.9			56.9			31.8	
Approach LOS		D			C			E			C	

Intersection Summary			
HCM 2000 Control Delay	43.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	85.4	Sum of lost time (s)	25.5
Intersection Capacity Utilization	64.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	187	55	75	193	83	8	168	694	150	9	635	352
Future Volume (vph)	187	55	75	193	83	8	168	694	150	9	635	352
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.91		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3268	1619		1954	2029		1728	3363		1728	3455	1546
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3268	1619		1954	2029		1728	3363		1728	3455	1546
Peak-hour factor, PHF	0.93	0.93	0.93	0.90	0.90	0.90	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	201	59	81	214	92	9	183	754	163	10	683	378
RTOR Reduction (vph)	0	40	0	0	3	0	0	12	0	0	0	200
Lane Group Flow (vph)	201	100	0	214	98	0	183	905	0	10	683	178
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Actuated Green, G (s)	10.2	10.2		14.8	14.8		12.3	41.0		1.2	29.9	46.6
Effective Green, g (s)	10.2	10.2		14.8	14.8		12.3	41.0		1.2	29.9	46.6
Actuated g/C Ratio	0.10	0.10		0.15	0.15		0.12	0.41		0.01	0.30	0.47
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	336	166		291	303		214	1391		20	1042	726
v/s Ratio Prot	0.06	c0.06		c0.11	0.05		c0.11	c0.27		0.01	0.20	0.11
v/s Ratio Perm												
v/c Ratio	0.60	0.60		0.74	0.32		0.86	0.65		0.50	0.66	0.24
Uniform Delay, d1	42.5	42.5		40.3	37.7		42.5	23.3		48.7	30.1	15.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.9	6.0		9.3	0.6		26.8	1.1		18.3	1.5	0.2
Delay (s)	45.3	48.5		49.6	38.3		69.3	24.4		67.0	31.6	15.9
Level of Service	D	D		D	D		E	C		E	C	B
Approach Delay (s)		46.6			46.0			31.9			26.4	
Approach LOS		D			D			C			C	

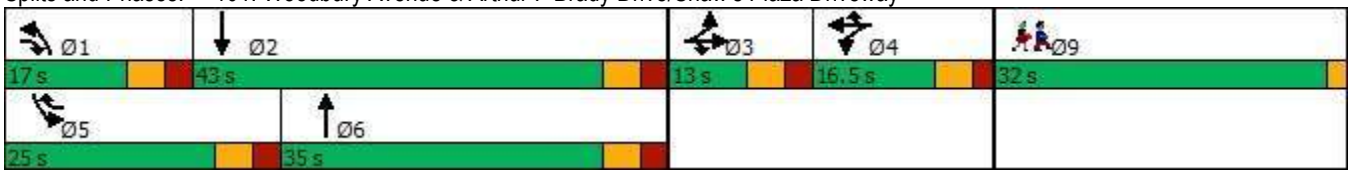
Intersection Summary			
HCM 2000 Control Delay	33.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	99.1	Sum of lost time (s)	28.0
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	94	257	71	71	152	222	692	37	140	811	89
Future Volume (vph)	105	94	257	71	71	152	222	692	37	140	811	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	10	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		100	0		0	300		0	250		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		432			159			782			407	
Travel Time (s)		11.8			4.3			17.8			9.3	
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	3 1	4	4	4 5	1	6		5	2	
Permitted Phases												
Detector Phase	3	3	3 1	4	4	4 5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.0	12.0		11.5	11.5		12.0	16.0		12.0	16.0	
Total Split (s)	13.0	13.0		16.5	16.5		17.0	35.0		25.0	43.0	
Total Split (%)	10.7%	10.7%		13.6%	13.6%		14.0%	28.8%		20.6%	35.4%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.5	2.5		2.0	2.0		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		Min	Min	

Intersection Summary

Area Type: Other
Cycle Length: 121.5
Actuated Cycle Length: 92.2
Natural Cycle: 145
Control Type: Actuated-Uncoordinated

Splits and Phases: 101: Woodbury Avenue & Arthur F Brady Drive/Shaw's Plaza Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	26%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

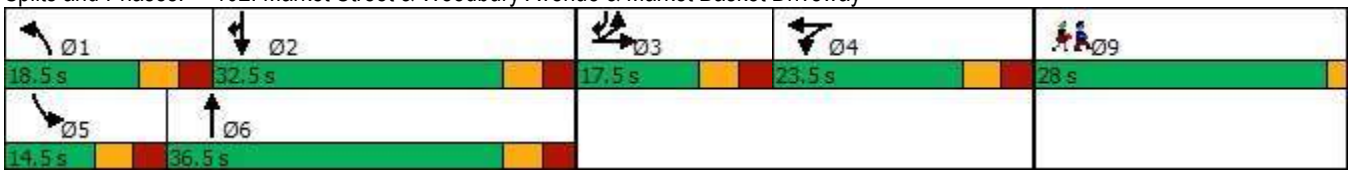
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	67	57	183	91	14	108	742	183	17	719	396
Future Volume (vph)	195	67	57	183	91	14	108	742	183	17	719	396
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Storage Length (ft)	275		0	0		0	300		0	275		275
Storage Lanes	2		0	1		0	1		0	1		0
Taper Length (ft)	100			25			100			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		707			198			600			782	
Travel Time (s)		16.1			5.4			13.6			17.8	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Detector Phase	3	3		4	4		1	6		5	2	2 3
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.5	12.5		12.5	12.5		12.5	16.5		12.5	16.5	
Total Split (s)	17.5	17.5		23.5	23.5		18.5	36.5		14.5	32.5	
Total Split (%)	14.6%	14.6%		19.6%	19.6%		15.4%	30.4%		12.1%	27.1%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 92
Natural Cycle: 105
Control Type: Actuated-Uncoordinated

Splits and Phases: 102: Market Street & Woodbury Avenue & Market Basket Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	23%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	94	257	71	71	152	222	692	37	140	811	89
Future Volume (vph)	105	94	257	71	71	152	222	692	37	140	811	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	10	11	11
Total Lost time (s)		6.0	6.0		5.5	5.5	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1789	1561		1713	1492	1728	3429		1668	3404	
Flt Permitted		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1789	1561		1713	1492	1728	3429		1668	3404	
Peak-hour factor, PHF	0.95	0.95	0.95	0.90	0.90	0.90	0.97	0.97	0.97	0.90	0.90	0.90
Adj. Flow (vph)	111	99	271	79	79	169	229	713	38	156	901	99
RTOR Reduction (vph)	0	0	180	0	0	124	0	3	0	0	6	0
Lane Group Flow (vph)	0	210	91	0	158	45	229	748	0	156	994	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	3 1	4	4	4 5	1	6		5	2	
Permitted Phases												
Actuated Green, G (s)		7.2	18.4		11.2	24.7	11.2	31.4		13.5	33.7	
Effective Green, g (s)		7.2	18.4		11.2	24.7	11.2	31.4		13.5	33.7	
Actuated g/C Ratio		0.08	0.20		0.12	0.26	0.12	0.34		0.14	0.36	
Clearance Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		137	307		205	394	207	1152		241	1228	
v/s Ratio Prot		c0.12	0.06		c0.09	0.03	c0.13	0.22		0.09	c0.29	
v/s Ratio Perm												
v/c Ratio		1.53	0.30		0.77	0.11	1.11	0.65		0.65	0.81	
Uniform Delay, d1		43.1	32.0		39.9	26.0	41.1	26.3		37.7	26.9	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		273.0	0.5		16.3	0.1	93.9	1.3		5.9	4.0	
Delay (s)		316.1	32.5		56.1	26.2	135.0	27.6		43.6	31.0	
Level of Service		F	C		E	C	F	C		D	C	
Approach Delay (s)		156.3			40.6			52.7			32.7	
Approach LOS		F			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	60.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	93.4	Sum of lost time (s)	25.5
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	67	57	183	91	14	108	742	183	17	719	396
Future Volume (vph)	195	67	57	183	91	14	108	742	183	17	719	396
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.93		1.00	0.98		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3300	1667		1954	2015		1728	3352		1728	3455	1546
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3300	1667		1954	2015		1728	3352		1728	3455	1546
Peak-hour factor, PHF	0.97	0.97	0.97	0.95	0.95	0.95	0.95	0.95	0.95	0.96	0.96	0.96
Adj. Flow (vph)	201	69	59	193	96	15	114	781	193	18	749	412
RTOR Reduction (vph)	0	25	0	0	4	0	0	14	0	0	0	211
Lane Group Flow (vph)	201	103	0	193	107	0	114	960	0	18	749	202
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Actuated Green, G (s)	10.4	10.4		13.8	13.8		10.6	38.8		2.6	30.8	47.7
Effective Green, g (s)	10.4	10.4		13.8	13.8		10.6	38.8		2.6	30.8	47.7
Actuated g/C Ratio	0.11	0.11		0.14	0.14		0.11	0.40		0.03	0.32	0.49
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	352	177		276	285		187	1333		46	1091	756
v/s Ratio Prot	0.06	c0.06		c0.10	0.05		c0.07	c0.29		0.01	0.22	0.13
v/s Ratio Perm												
v/c Ratio	0.57	0.58		0.70	0.37		0.61	0.72		0.39	0.69	0.27
Uniform Delay, d1	41.4	41.5		39.9	37.9		41.5	24.8		46.7	29.1	14.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.2	4.8		7.5	0.8		5.5	1.9		5.4	1.8	0.2
Delay (s)	43.7	46.3		47.4	38.8		47.0	26.7		52.1	30.9	14.8
Level of Service	D	D		D	D		D	C		D	C	B
Approach Delay (s)		44.7			44.2			28.8			25.6	
Approach LOS		D			D			C			C	

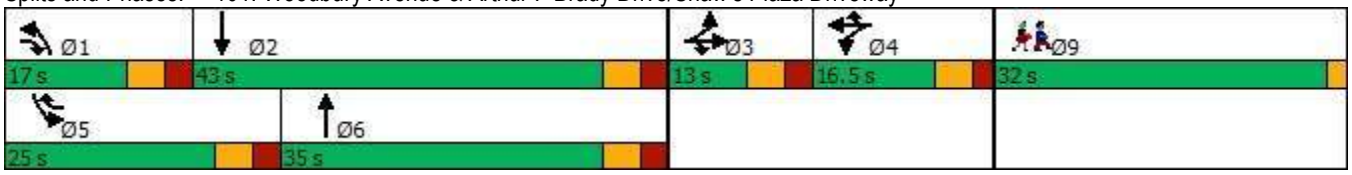
Intersection Summary			
HCM 2000 Control Delay	30.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	97.5	Sum of lost time (s)	28.0
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	23	109	10	18	39	146	406	3	38	515	48
Future Volume (vph)	60	23	109	10	18	39	146	406	3	38	515	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	10	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		100	0		0	300		0	250		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		432			159			782			407	
Travel Time (s)		9.8			4.3			17.8			9.3	
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	1 3	4	4	4 5	1	6		5	2	
Permitted Phases												
Detector Phase	3	3	1 3	4	4	4 5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.0	12.0		11.5	11.5		12.0	16.0		12.0	16.0	
Total Split (s)	13.0	13.0		16.5	16.5		17.0	35.0		25.0	43.0	
Total Split (%)	10.7%	10.7%		13.6%	13.6%		14.0%	28.8%		20.6%	35.4%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.5	2.5		2.0	2.0		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		Min	Min	

Intersection Summary

Area Type: Other
Cycle Length: 121.5
Actuated Cycle Length: 64.3
Natural Cycle: 85
Control Type: Actuated-Uncoordinated

Splits and Phases: 101: Woodbury Avenue & Arthur F Brady Drive/Shaw's Plaza Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	26%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

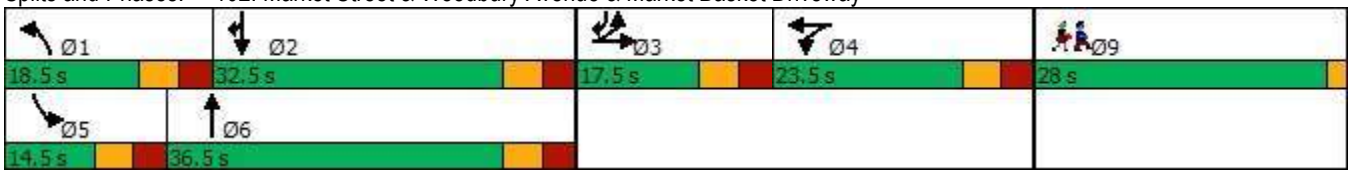
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	38	95	67	33	9	140	446	110	6	395	241
Future Volume (vph)	100	38	95	67	33	9	140	446	110	6	395	241
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Storage Length (ft)	275		0	0		0	300		0	275		275
Storage Lanes	2		0	1		0	1		0	1		0
Taper Length (ft)	100			25			100			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		707			198			600			782	
Travel Time (s)		16.1			5.4			13.6			17.8	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Detector Phase	3	3		4	4		1	6		5	2	2 3
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.5	12.5		12.5	12.5		12.5	16.5		12.5	16.5	
Total Split (s)	17.5	17.5		23.5	23.5		18.5	36.5		14.5	32.5	
Total Split (%)	14.6%	14.6%		19.6%	19.6%		15.4%	30.4%		12.1%	27.1%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 73.8
Natural Cycle: 85
Control Type: Actuated-Uncoordinated

Splits and Phases: 102: Market Street & Woodbury Avenue & Market Basket Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	23%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	23	109	10	18	39	146	406	3	38	515	48
Future Volume (vph)	60	23	109	10	18	39	146	406	3	38	515	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	10	11	11
Total Lost time (s)		6.0	6.0		5.5	5.5	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1738	1531		1675	1449	1678	3352		1620	3313	
Flt Permitted		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1738	1531		1675	1449	1678	3352		1620	3313	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.95	0.95	0.95	0.90	0.90	0.90
Adj. Flow (vph)	67	26	121	11	20	43	154	427	3	42	572	53
RTOR Reduction (vph)	0	0	87	0	0	31	0	1	0	0	6	0
Lane Group Flow (vph)	0	93	34	0	31	12	154	429	0	42	619	0
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	1 3	4	4	4 5	1	6		5	2	
Permitted Phases												
Actuated Green, G (s)		7.2	18.5		5.6	18.7	11.3	21.4		7.6	17.7	
Effective Green, g (s)		7.2	18.5		5.6	18.7	11.3	21.4		7.6	17.7	
Actuated g/C Ratio		0.11	0.28		0.09	0.29	0.17	0.33		0.12	0.27	
Clearance Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		191	433		143	414	290	1098		188	898	
v/s Ratio Prot		c0.05	0.02		c0.02	0.01	c0.09	c0.13		0.03	c0.19	
v/s Ratio Perm												
v/c Ratio		0.49	0.08		0.22	0.03	0.53	0.39		0.22	0.69	
Uniform Delay, d1		27.3	17.2		27.8	16.8	24.6	16.9		26.2	21.3	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.0	0.1		0.8	0.0	1.9	0.2		0.6	2.2	
Delay (s)		29.3	17.2		28.6	16.8	26.5	17.2		26.8	23.6	
Level of Service		C	B		C	B	C	B		C	C	
Approach Delay (s)		22.5			21.7			19.6			23.8	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	21.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.3	Sum of lost time (s)	25.5
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

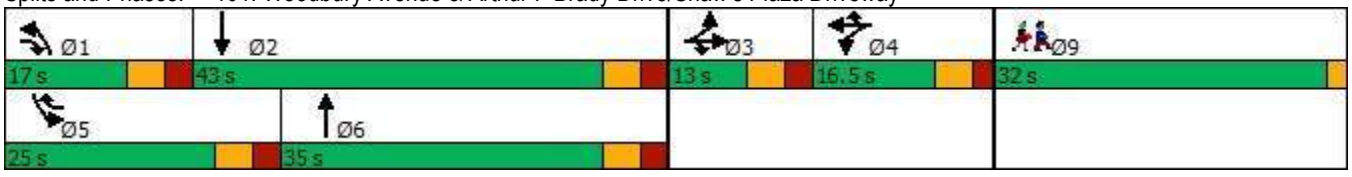
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	38	95	67	33	9	140	446	110	6	395	241
Future Volume (vph)	100	38	95	67	33	9	140	446	110	6	395	241
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.89		1.00	0.97		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3236	1567		1862	1897		1711	3320		1678	3355	1501
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3236	1567		1862	1897		1711	3320		1678	3355	1501
Peak-hour factor, PHF	0.94	0.94	0.94	0.90	0.90	0.90	0.90	0.90	0.90	0.97	0.97	0.97
Adj. Flow (vph)	106	40	101	74	37	10	156	496	122	6	407	248
RTOR Reduction (vph)	0	74	0	0	8	0	0	14	0	0	0	135
Lane Group Flow (vph)	106	67	0	74	39	0	156	604	0	6	407	113
Heavy Vehicles (%)	2%	2%	2%	6%	6%	6%	2%	2%	2%	4%	4%	4%
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Actuated Green, G (s)	8.8	8.8		7.1	7.1		12.5	33.6		0.9	22.0	37.3
Effective Green, g (s)	8.8	8.8		7.1	7.1		12.5	33.6		0.9	22.0	37.3
Actuated g/C Ratio	0.11	0.11		0.09	0.09		0.15	0.41		0.01	0.27	0.46
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	348	168		162	165		262	1367		18	904	686
v/s Ratio Prot	0.03	c0.04		c0.04	0.02		c0.09	c0.18		0.00	0.12	0.08
v/s Ratio Perm												
v/c Ratio	0.30	0.40		0.46	0.24		0.60	0.44		0.33	0.45	0.17
Uniform Delay, d1	33.6	33.9		35.4	34.7		32.2	17.3		40.1	24.8	13.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.5	1.6		2.0	0.7		3.6	0.2		10.6	0.4	0.1
Delay (s)	34.1	35.5		37.5	35.5		35.8	17.5		50.7	25.1	13.1
Level of Service	C	D		D	D		D	B		D	C	B
Approach Delay (s)		34.9			36.7			21.2			20.9	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	81.6	Sum of lost time (s)	28.0
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	54	239	41	75	96	274	679	26	98	814	74
Future Volume (vph)	75	54	239	41	75	96	274	679	26	98	814	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	10	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		100	0		0	300		0	250		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		432			159			782			407	
Travel Time (s)		9.8			4.3			17.8			9.3	
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	3 1	4	4	4 5	1	6		5	2	
Permitted Phases												
Detector Phase	3	3	3 1	4	4	4 5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.0	12.0		11.5	11.5		12.0	16.0		12.0	16.0	
Total Split (s)	13.0	13.0		16.5	16.5		17.0	35.0		25.0	43.0	
Total Split (%)	10.7%	10.7%		13.6%	13.6%		14.0%	28.8%		20.6%	35.4%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.5	2.5		2.0	2.0		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		Min	Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 121.5	
Actuated Cycle Length: 88.3	
Natural Cycle: 135	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 101: Woodbury Avenue & Arthur F Brady Drive/Shaw's Plaza Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	26%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

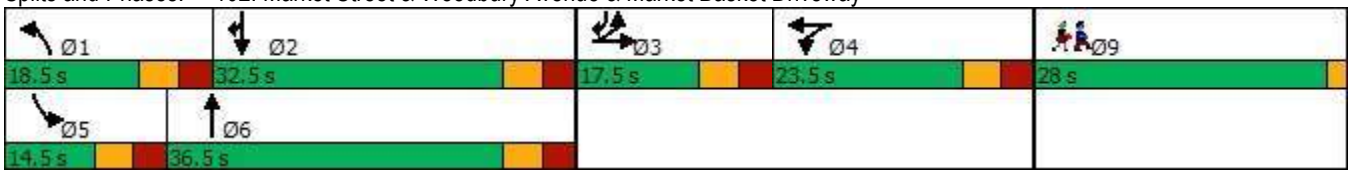
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	60	83	211	91	9	186	765	164	10	700	387
Future Volume (vph)	205	60	83	211	91	9	186	765	164	10	700	387
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Storage Length (ft)	275		0	0		0	300		0	275		275
Storage Lanes	2		0	1		0	1		0	1		0
Taper Length (ft)	100			25			100			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		707			198			600			782	
Travel Time (s)		16.1			5.4			13.6			17.8	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Detector Phase	3	3		4	4		1	6		5	2	2 3
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.5	12.5		12.5	12.5		12.5	16.5		12.5	16.5	
Total Split (s)	17.5	17.5		23.5	23.5		18.5	36.5		14.5	32.5	
Total Split (%)	14.6%	14.6%		19.6%	19.6%		15.4%	30.4%		12.1%	27.1%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 95.6
Natural Cycle: 115
Control Type: Actuated-Uncoordinated

Splits and Phases: 102: Market Street & Woodbury Avenue & Market Basket Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	23%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	54	239	41	75	96	274	679	26	98	814	74
Future Volume (vph)	75	54	239	41	75	96	274	679	26	98	814	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	10	11	11
Total Lost time (s)		6.0	6.0		5.5	5.5	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1750	1531		1742	1507	1728	3436		1668	3412	
Flt Permitted		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1750	1531		1742	1507	1728	3436		1668	3412	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	60	266	46	83	107	288	715	27	103	857	78
RTOR Reduction (vph)	0	0	211	0	0	81	0	2	0	0	5	0
Lane Group Flow (vph)	0	143	55	0	129	26	288	740	0	103	930	0
Heavy Vehicles (%)	2%	2%	2%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	3 1	4	4	4 5	1	6		5	2	
Permitted Phases												
Actuated Green, G (s)		7.2	18.5		10.9	22.1	11.3	30.1		11.2	30.0	
Effective Green, g (s)		7.2	18.5		10.9	22.1	11.3	30.1		11.2	30.0	
Actuated g/C Ratio		0.08	0.21		0.12	0.25	0.13	0.34		0.13	0.34	
Clearance Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		141	317		212	372	218	1158		209	1146	
v/s Ratio Prot		c0.08	0.04		c0.07	0.02	c0.17	0.22		0.06	c0.27	
v/s Ratio Perm												
v/c Ratio		1.01	0.17		0.61	0.07	1.32	0.64		0.49	0.81	
Uniform Delay, d1		41.0	29.1		37.2	25.7	39.0	25.0		36.4	27.1	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		79.6	0.3		4.9	0.1	172.9	1.2		1.8	4.5	
Delay (s)		120.6	29.4		42.1	25.8	211.9	26.2		38.2	31.5	
Level of Service		F	C		D	C	F	C		D	C	
Approach Delay (s)		61.3			34.7			78.1			32.2	
Approach LOS		E			C			E			C	

Intersection Summary			
HCM 2000 Control Delay	54.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	89.3	Sum of lost time (s)	25.5
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

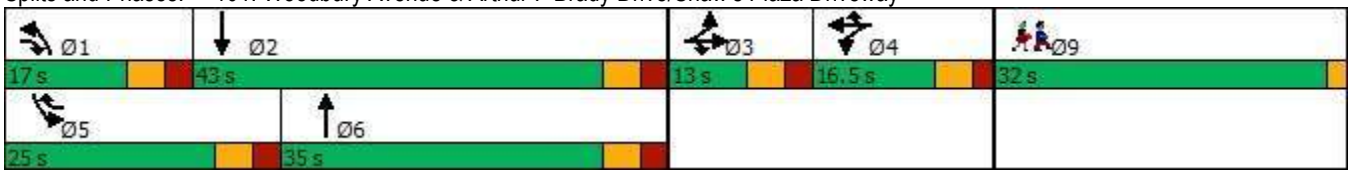
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	60	83	211	91	9	186	765	164	10	700	387
Future Volume (vph)	205	60	83	211	91	9	186	765	164	10	700	387
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.91		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3268	1619		1954	2029		1728	3364		1728	3455	1546
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3268	1619		1954	2029		1728	3364		1728	3455	1546
Peak-hour factor, PHF	0.93	0.93	0.93	0.90	0.90	0.90	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	220	65	89	234	101	10	202	832	178	11	753	416
RTOR Reduction (vph)	0	40	0	0	3	0	0	12	0	0	0	217
Lane Group Flow (vph)	220	114	0	234	108	0	202	998	0	11	753	199
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Actuated Green, G (s)	10.6	10.6		15.8	15.8		12.2	42.8		1.2	31.8	48.9
Effective Green, g (s)	10.6	10.6		15.8	15.8		12.2	42.8		1.2	31.8	48.9
Actuated g/C Ratio	0.10	0.10		0.15	0.15		0.12	0.42		0.01	0.31	0.48
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	338	167		301	313		205	1406		20	1072	738
v/s Ratio Prot	0.07	c0.07		c0.12	0.05		c0.12	c0.30		0.01	0.22	0.13
v/s Ratio Perm												
v/c Ratio	0.65	0.68		0.78	0.35		0.99	0.71		0.55	0.70	0.27
Uniform Delay, d1	44.1	44.3		41.6	38.7		45.0	24.7		50.3	31.1	16.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.4	10.8		11.9	0.7		58.2	1.7		28.9	2.1	0.2
Delay (s)	48.6	55.1		53.5	39.4		103.2	26.4		79.2	33.2	16.2
Level of Service	D	E		D	D		F	C		E	C	B
Approach Delay (s)		51.3			49.0			39.2			27.7	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	37.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	102.4	Sum of lost time (s)	28.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	103	284	79	79	167	246	763	41	153	891	98
Future Volume (vph)	116	103	284	79	79	167	246	763	41	153	891	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	10	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		100	0		0	300		0	250		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		432			159			782			407	
Travel Time (s)		11.8			4.3			17.8			9.3	
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	3 1	4	4	4 5	1	6		5	2	
Permitted Phases												
Detector Phase	3	3	3 1	4	4	4 5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.0	12.0		11.5	11.5		12.0	16.0		12.0	16.0	
Total Split (s)	13.0	13.0		16.5	16.5		17.0	35.0		25.0	43.0	
Total Split (%)	10.7%	10.7%		13.6%	13.6%		14.0%	28.8%		20.6%	35.4%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.5	2.5		2.0	2.0		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		Min	Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 121.5	
Actuated Cycle Length: 95.9	
Natural Cycle: 145	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 101: Woodbury Avenue & Arthur F Brady Drive/Shaw's Plaza Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	26%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

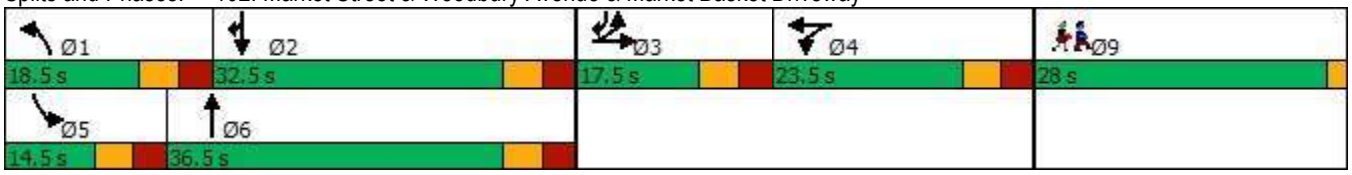
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	214	73	63	201	99	16	119	820	201	19	793	435
Future Volume (vph)	214	73	63	201	99	16	119	820	201	19	793	435
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Storage Length (ft)	275		0	0		0	300		0	275		275
Storage Lanes	2		0	1		0	1		0	1		0
Taper Length (ft)	100			25			100			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		707			198			600			782	
Travel Time (s)		16.1			5.4			13.6			17.8	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Detector Phase	3	3		4	4		1	6		5	2	2 3
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.5	12.5		12.5	12.5		12.5	16.5		12.5	16.5	
Total Split (s)	17.5	17.5		23.5	23.5		18.5	36.5		14.5	32.5	
Total Split (%)	14.6%	14.6%		19.6%	19.6%		15.4%	30.4%		12.1%	27.1%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lead		Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 93.5
Natural Cycle: 115
Control Type: Actuated-Uncoordinated

Splits and Phases: 102: Market Street & Woodbury Avenue & Market Basket Driveway



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Right Turn on Red	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	28.0
Total Split (s)	28.0
Total Split (%)	23%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	103	284	79	79	167	246	763	41	153	891	98
Future Volume (vph)	116	103	284	79	79	167	246	763	41	153	891	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	10	10	11	11	11	10	11	11
Total Lost time (s)		6.0	6.0		5.5	5.5	6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1789	1561		1713	1492	1728	3429		1668	3404	
Flt Permitted		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1789	1561		1713	1492	1728	3429		1668	3404	
Peak-hour factor, PHF	0.95	0.95	0.95	0.90	0.90	0.90	0.97	0.97	0.97	0.90	0.90	0.90
Adj. Flow (vph)	122	108	299	88	88	186	254	787	42	170	990	109
RTOR Reduction (vph)	0	0	183	0	0	138	0	3	0	0	6	0
Lane Group Flow (vph)	0	230	116	0	176	48	254	826	0	170	1093	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Split	NA	pt+ov	Split	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	3	3	3 1	4	4	4 5	1	6		5	2	
Permitted Phases												
Actuated Green, G (s)		7.1	18.3		11.2	25.3	11.2	34.7		14.1	37.6	
Effective Green, g (s)		7.1	18.3		11.2	25.3	11.2	34.7		14.1	37.6	
Actuated g/C Ratio		0.07	0.19		0.12	0.26	0.12	0.36		0.14	0.39	
Clearance Time (s)		6.0			5.5		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		130	293		197	387	198	1222		241	1315	
v/s Ratio Prot		c0.13	0.07		c0.10	0.03	c0.15	0.24		0.10	c0.32	
v/s Ratio Perm												
v/c Ratio		1.77	0.39		0.89	0.12	1.28	0.68		0.71	0.83	
Uniform Delay, d1		45.1	34.6		42.5	27.5	43.0	26.5		39.6	27.0	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		375.5	0.9		36.0	0.1	160.1	1.5		9.0	4.6	
Delay (s)		420.6	35.5		78.5	27.7	203.1	28.0		48.7	31.6	
Level of Service		F	D		E	C	F	C		D	C	
Approach Delay (s)		202.9			52.4			69.1			33.9	
Approach LOS		F			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	75.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	97.3	Sum of lost time (s)	25.5
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

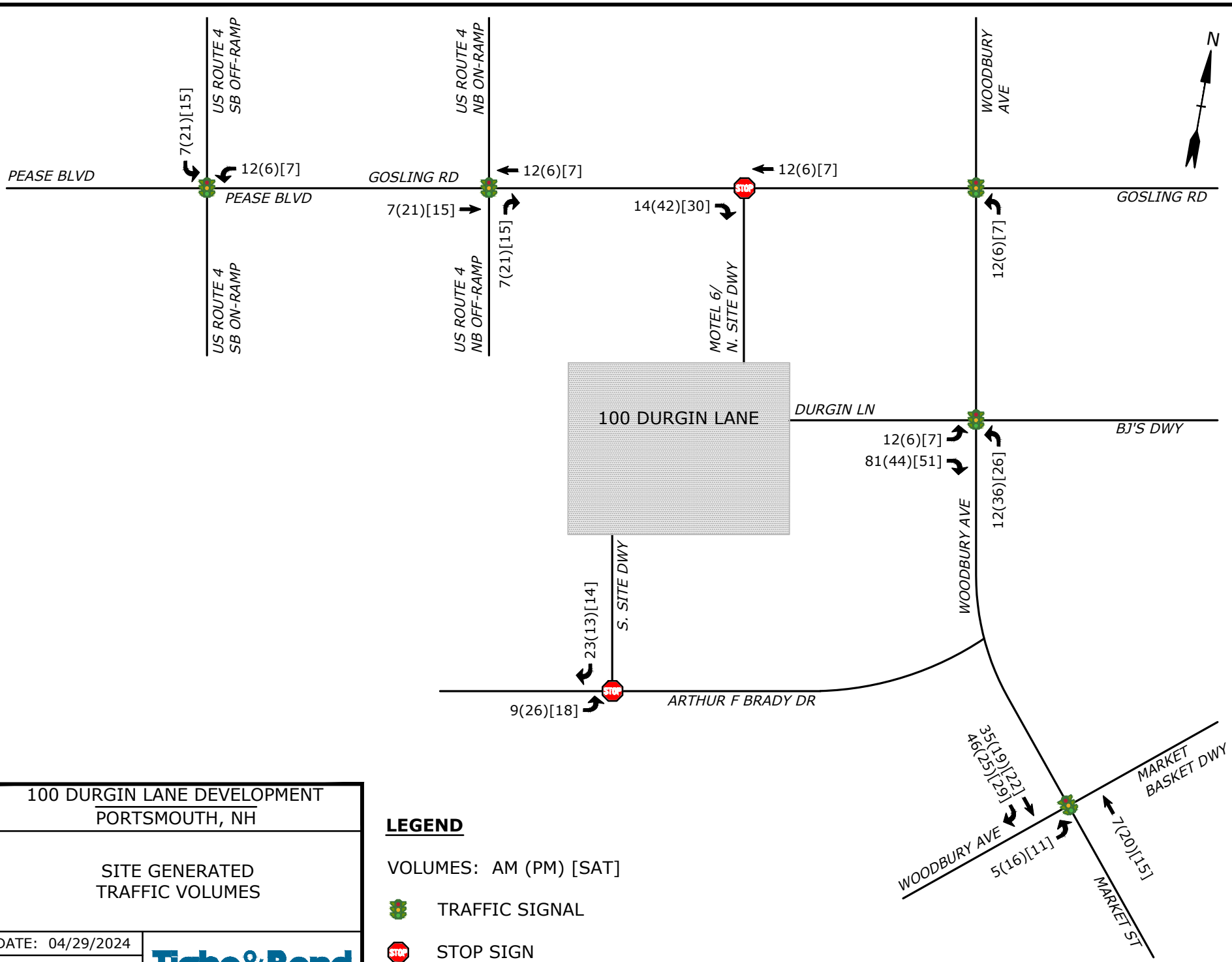
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	214	73	63	201	99	16	119	820	201	19	793	435
Future Volume (vph)	214	73	63	201	99	16	119	820	201	19	793	435
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	14	14	14	11	11	11	11	11	11
Grade (%)		5%			-5%			0%			0%	
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	0.97	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.93		1.00	0.98		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3300	1666		1954	2013		1728	3353		1728	3455	1546
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3300	1666		1954	2013		1728	3353		1728	3455	1546
Peak-hour factor, PHF	0.97	0.97	0.97	0.95	0.95	0.95	0.95	0.95	0.95	0.96	0.96	0.96
Adj. Flow (vph)	221	75	65	212	104	17	125	863	212	20	826	453
RTOR Reduction (vph)	0	26	0	0	5	0	0	15	0	0	0	234
Lane Group Flow (vph)	221	114	0	212	116	0	125	1060	0	20	826	219
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	3	3		4	4		1	6		5	2	2 3
Permitted Phases												
Actuated Green, G (s)	10.6	10.6		14.7	14.7		11.0	39.1		2.7	30.8	47.9
Effective Green, g (s)	10.6	10.6		14.7	14.7		11.0	39.1		2.7	30.8	47.9
Actuated g/C Ratio	0.11	0.11		0.15	0.15		0.11	0.39		0.03	0.31	0.48
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	353	178		290	298		192	1324		47	1074	748
v/s Ratio Prot	0.07	c0.07		c0.11	0.06		c0.07	c0.32		0.01	0.24	0.14
v/s Ratio Perm												
v/c Ratio	0.63	0.64		0.73	0.39		0.65	0.80		0.43	0.77	0.29
Uniform Delay, d1	42.3	42.4		40.3	38.1		42.2	26.5		47.4	30.9	15.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.4	7.7		9.1	0.8		7.7	3.6		6.1	3.4	0.2
Delay (s)	45.7	50.0		49.4	38.9		49.8	30.1		53.5	34.3	15.6
Level of Service	D	D		D	D		D	C		D	C	B
Approach Delay (s)		47.4			45.6			32.1			28.0	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	33.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	99.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX E

Background Development Traffic Volumes



100 DURGIN LANE DEVELOPMENT
PORTSMOUTH, NH

SITE GENERATED
TRAFFIC VOLUMES

DATE: 04/29/2024
SCALE: NTS
FIGURE 6

Tighe&Bond

LEGEND

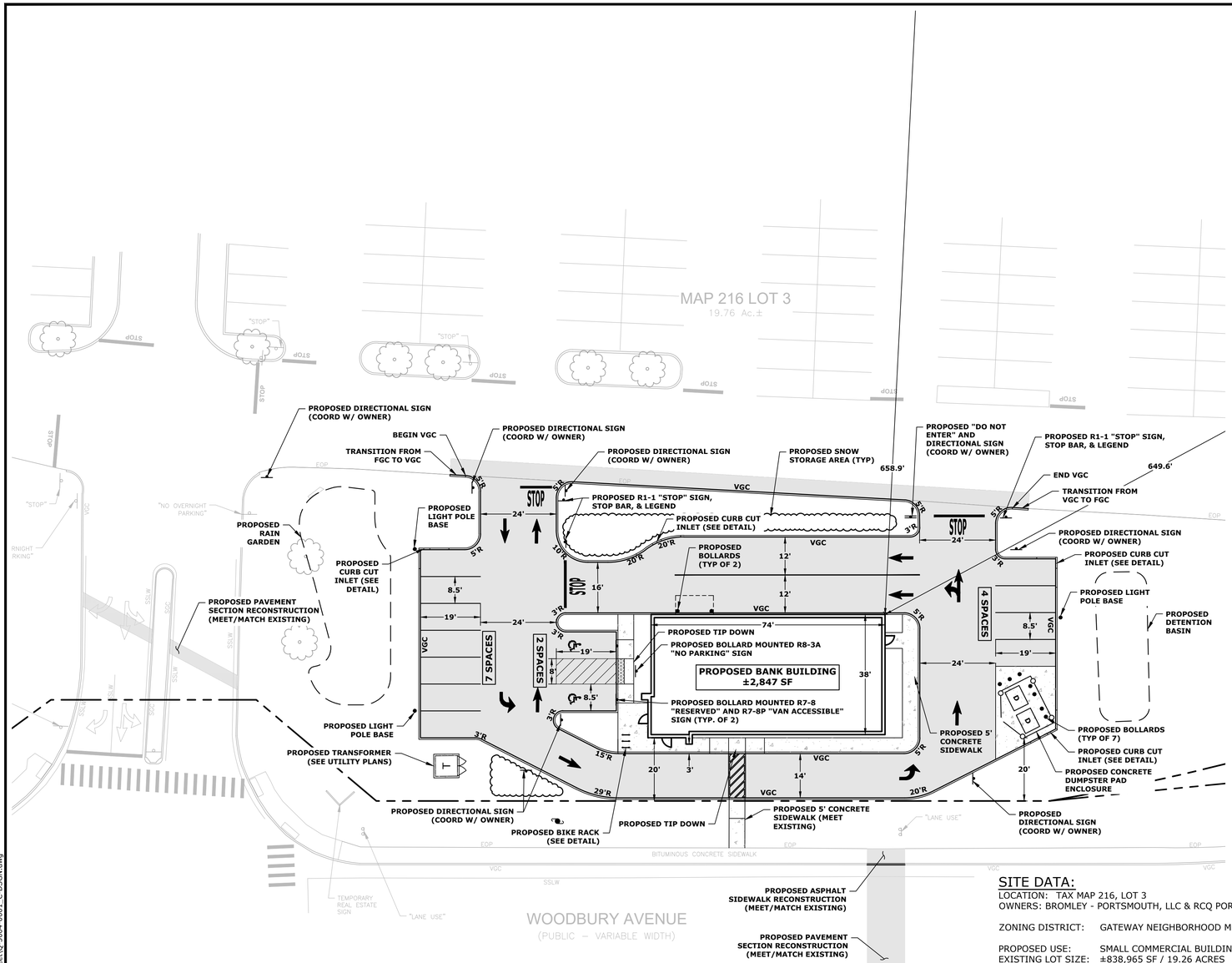
VOLUMES: AM (PM) [SAT]

TRAFFIC SIGNAL

STOP SIGN

APPENDIX F

Site Development Plan



SITE NOTES:

1. PAVEMENT MARKINGS, INCLUDING BUT NOT LIMITED TO; PARKING SPACES, STOP BARS, ADA SYMBOLS, PAINTED ISLANDS, CROSS WALKS, ARROWS, LEGENDS, AND CENTERLINES, SHALL BE CONSTRUCTED AS SHOWN ON THE DRAWINGS AND DETAILS, AND SHALL MEET THE FOLLOWING REQUIREMENTS:
   - ALL ON-SITE PAVEMENT MARKINGS EXCEPT CENTERLINES & MEDIAN ISLANDS SHALL BE CONSTRUCTED USING WHITE TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248 TYPE "F".
   - ALL ON-SITE CENTERLINES AND MEDIAN ISLANDS SHALL BE CONSTRUCTED USING YELLOW TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248 TYPE "F".
   - ALL PAVEMENT MARKINGS WITHIN PUBLIC RIGHT OF WAY SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, AND APPLICABLE DEPARTMENT OF TRANSPORTATION (DOT), STANDARD SPECIFICATIONS.
2. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" CURRENT EDITION, "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" CURRENT EDITION, AND THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA), THE ARCHITECTURAL BARRIERS ACT (ABA), AND THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (AAB), AS APPLICABLE.
3. THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED LAND SURVEYOR TO DETERMINE ALL LINES AND GRADES.
4. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAW CUT LINE WITH RS-1 EMULSION IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
5. THE CONTRACTOR TO PROVIDE BACKFILL AND COMPACTION AT CURB LINE AFTER CONCRETE FORMS FOR SIDEWALKS AND PADS HAVE BEEN STRIPPED.
6. COORDINATE ALL WORK ADJACENT TO BUILDINGS WITH BUILDING DRAWINGS/CONTRACTOR.
7. SEE ARCHITECTURAL/BUILDING DRAWINGS FOR ALL CONCRETE PADS & SIDEWALKS ADJACENT TO BUILDING.
8. ALL LIGHT POLE BASES NOT PROTECTED BY A RAISED CURB SHALL BE PAINTED YELLOW.
9. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
10. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES & SPECIFICATIONS.
11. THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN PUBLIC RIGHT OF WAY WITH THE CITY OF PORTSMOUTH.
12. ALL WORK SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS AND WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
13. THE CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND .PDF FILES) TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
14. PROPERTY MANAGER WILL BE RESPONSIBLE FOR TIMELY SNOW REMOVAL FROM ALL PUBLIC WALKS, DRIVES, AND PARKING AREAS ON-SITE. SNOW SHALL BE HAULED OFF-SITE AND LEGALLY DISPOSED OF, WHEN NECESSARY, WHEN SNOW STORAGE AREAS HAVE REACHED CAPACITY.
15. NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICT, ERROR, AMBIGUITY, OR DISCREPANCY WITH THE PLANS OR BETWEEN THE PLANS AND ANY APPLICABLE LAW, REGULATION, CODE, STANDARD SPECIFICATION, OR MANUFACTURER'S INSTRUCTIONS.
16. TIGHE & BOND ASSUMES NO RESPONSIBILITY FOR ANY ISSUES, LEGAL OR OTHERWISE, RESULTING FROM CHANGES MADE TO THESE DRAWINGS WITHOUT WRITTEN AUTHORIZATION FROM TIGHE & BOND.

SITE RECORDING NOTES:

1. THIS SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
2. ALL IMPROVEMENTS SHOWN ON THIS SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR.

LEGEND

	PROPOSED BUILDING
	PROPOSED PAVEMENT SECTION
	PROPOSED CONCRETE SECTION
	PROPOSED SNOW STORAGE
	PROPERTY LINE
	PROPOSED EDGE OF PAVEMENT
	PROPOSED CURB
	PROPOSED SIGN
•	PROPOSED BOLLARD
TYP	TYPICAL
BLDG	BUILDING
COORD	COORDINATE
VGC	VERTICAL GRANITE CURB
SGC	SLOPED GRANITE CURB

SITE DATA:

LOCATION: TAX MAP 216, LOT 3
OWNERS: BROMLEY - PORTSMOUTH, LLC & RCQ PORTSMOUTH, LLC

ZONING DISTRICT: GATEWAY NEIGHBORHOOD MIXED USE CORRIDOR (G1)

PROPOSED USE: SMALL COMMERCIAL BUILDING (RETAIL BANK)
EXISTING LOT SIZE: ±838,965 SF / 19.26 ACRES

DEVELOPMENT STANDARDS

SMALL COMMERCIAL BUILDING (10.5B34.60)	REQUIRED	PROPOSED
MINIMUM LOT DEPTH:	NR	-
MINIMUM STREET FRONTAGE:	50 FT	2220.2 FT
FRONT YARD SETBACK:	0-20 FT	20 FT
MIN. SIDE YARD SETBACK	10 FT	649.6 FT
MIN. REAR YARD SETBACK	15 FT	658.9 FT
MAXIMUM DWELLING UNITS PER BUILDING	NR	-
MAXIMUM DWELLING UNIT SIZE	NR	-
MAXIMUM BUILDING HEIGHT	3 STORIES OR 40 FT	<40 FT
MINIMUM STREET-FACING FACADE HEIGHT	18 FT	
MAX. FINISH FLOOR ABOVE SIDEWALK	24"	
MAXIMUM BUILDING COVERAGE	70%	<1%
MAXIMUM BUILDING FOOTPRINT	10,000 SF	2,847 SF
MAXIMUM FACADE MODULATION LENGTH	50 FT	<50 FT
MINIMUM STREET FACING FACADE GLAZING	50% GROUND FLOOR	
MAXIMUM STREET FACING ENTRANCE SPACING	NR	-
ALLOWED ROOF TYPES	ALL	
ALLOWED FACADE TYPES: FORECOURT, RECESSED ENTRY, PORCH, OFFICEFRONT, SHOPFRONT, TERRACE, GALLERY, ARCADE		

COMMUNITY SPACE:	REQUIRED	PROPOSED
	10%	11.3%
	86,085 SF	96,975 SF
OPEN SPACE:	20%	21%
	172,171 SF	180,861 SF

PARKING REQUIREMENTS

FINANCIAL SERVICES
(1 PER 350 SF)

PARKING SPACES	REQUIRED	PROPOSED
	9 SPACES	13 SPACES
ADA PARKING SPACES	REQUIRED[2]	PROPOSED
	1 SPACES	2 SPACES

(2) - PER THE AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS, LATEST EDITION.

PARKING SPACE DIMENSIONAL REQUIREMENTS:

STANDARD 90° STALL :		
WIDTH	8.5 FT MIN	8.5 FT
LENGTH	19 FT MIN	19 FT
DRIVE AISLE WIDTH:		
90° (2-WAY TRAFFIC)	24 FT	24 FT

BICYCLE SPACES	REQUIRED	PROPOSED
1 BICYCLE SPACE / 10 PARKING SPACES:	2 SPACES	3 SPACES

Tighe&Bond

N

0 20' 40'
GRAPHIC SCALE

PROPOSED BANK PAD

BROMLEY-PORTSMOUTH, LLC &
RCQ-PORTSMOUTH, LLC
c/o QUINCY & COMPANY, INC.

1465 WOODBURY AVE
PORTSMOUTH, NH

MARK	DATE	DESCRIPTION
A	6/16/2025	TAC Submission

PROJECT NO:	Q5004-0001
DATE:	6/16/2025
FILE:	Q-5004-0001_C-DSGN.dwg
DRAWN BY:	NHW
DESIGNED/CHECKED BY:	NAH
APPROVED BY:	PMC

SITE PLAN

SCALE: AS SHOWN

C-102

Last Saved: 6/16/2025
Plotted: 6/16/2025 11:25am By: CKrzcuik
Tighe & Bond J:\Q\Q5004 Quincy & Company, Inc\0001_1465 Woodbury Avenue\Drawings\AutoCAD\Sheet\Q-5004-0001_C-DSGN.dwg

APPENDIX G

ITE Pass-By Rates

Vehicle Pass-By Rates by Land Use

Source: ITE *Trip Generation Manual* , 11th Edition

Land Use Code	912
Land Use	Drive-In Bank
Setting	General Urban/Suburban
Time Period	Weekday AM Peak Period
# Data Sites	8
Average Pass-By Rate	29%

Pass-By Characteristics for Individual Sites

GFA (000)	State or Province	Survey Year	# Interviews	Pass-By Trip (%)	Non-Pass-By Trips			Adj Street Peak Hour Volume	Source
					Primary (%)	Diverted (%)	Total (%)		
3.8	Pennsylvania	2005	11	27	—	—	73	—	19
3.8	Pennsylvania	2005	9	24	—	—	76	—	19
3.8	Pennsylvania	2005	22	34	—	—	66	—	19
3.8	Pennsylvania	2005	30	27	—	—	73	—	19
3.8	Pennsylvania	2005	34	40	—	—	60	—	19
3.8	Pennsylvania	2005	7	27	—	—	73	—	19
3.8	Pennsylvania	2005	15	16	—	—	84	—	19
3.8	Pennsylvania	2005	27	36	—	—	64	—	19

Vehicle Pass-By Rates by Land Use

Source: ITE *Trip Generation Manual* , 11th Edition

Land Use Code	912
Land Use	Drive-In Bank
Setting	General Urban/Suburban
Time Period	Weekday PM Peak Period
# Data Sites	19
Average Pass-By Rate	35%

Pass-By Characteristics for Individual Sites

GFA (000)	State or Province	Survey Year	# Interviews	Pass-By Trip (%)	Non-Pass-By Trips			Adj Street Peak Hour Volume	Source
					Primary (%)	Diverted (%)	Total (%)		
2.7	Washington	2007	—	26	66	8	74	—	11
2.8	Washington	2007	—	21	55	24	79	—	11
3.3	Kentucky	1993	—	48	22	30	52	2570	34
3.4	Kentucky	1993	—	64	22	14	36	2266	34
3.4	Kentucky	1993	75	57	11	32	43	1955	34
3.5	Kentucky	1993	53	47	32	21	53	2785	2
3.6	Washington	2007	—	42	50	8	58	—	11
3.6	Washington	2007	—	29	—	—	71	—	11
3.8	Pennsylvania	2005	56	43	—	—	57	—	19
3.8	Pennsylvania	2005	38	41	—	—	59	—	19
3.8	Pennsylvania	2005	14	24	—	—	76	—	19
3.8	Pennsylvania	2005	63	29	—	—	71	—	19
3.8	Pennsylvania	2005	70	29	—	—	71	—	19
3.8	Pennsylvania	2005	29	27	—	—	73	—	19
3.8	Pennsylvania	2005	41	25	—	—	75	—	19
3.8	Pennsylvania	2005	37	31	—	—	69	—	19
3.8	Pennsylvania	2005	19	29	—	—	71	—	19
3.8	Pennsylvania	2005	34	21	—	—	79	—	19
3.8	Pennsylvania	2005	36	29	—	—	71	—	19

Vehicle Pass-By Rates by Land Use

Source: ITE *Trip Generation Manual* , 11th Edition

Land Use Code	912
Land Use	Drive-In Bank
Setting	General Urban/Suburban
Time Period	Saturday Midday
# Data Sites	5
Average Pass-By Rate	38%

Pass-By Characteristics for Individual Sites

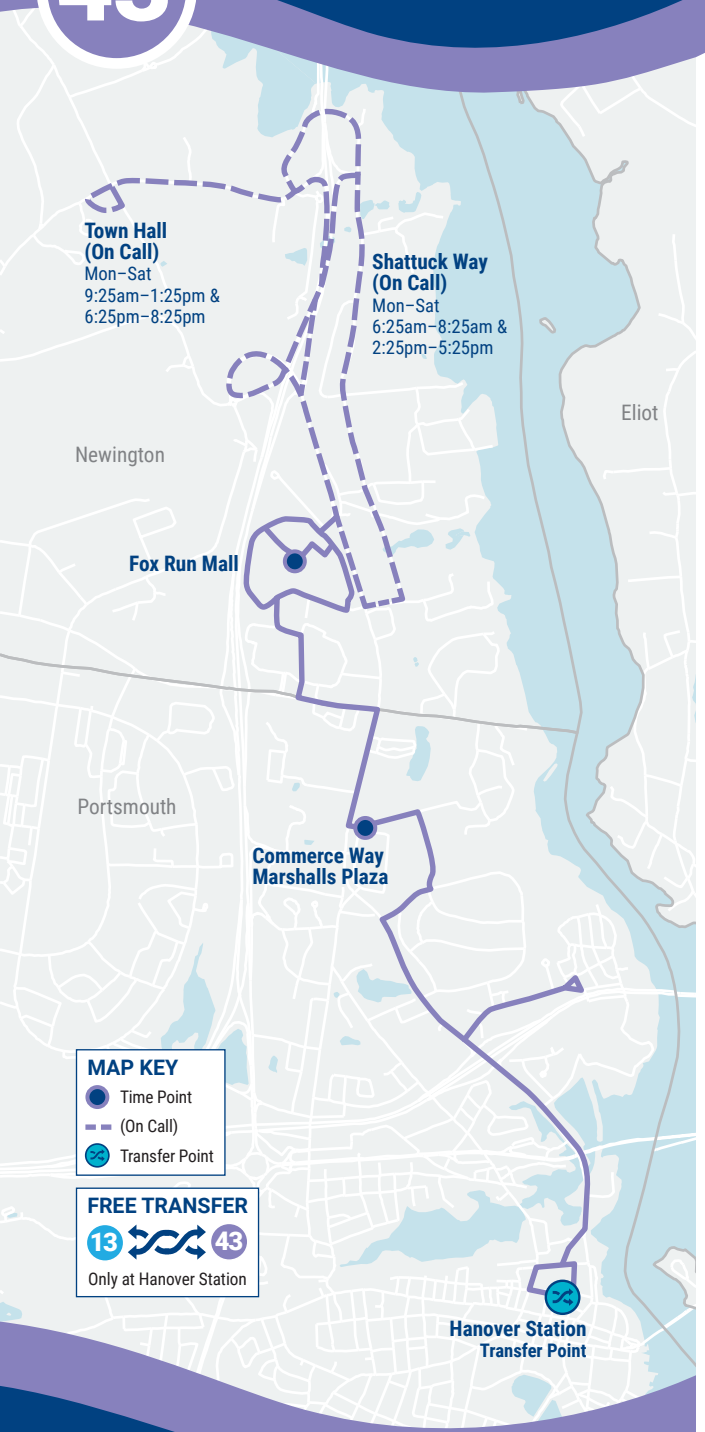
GFA (000)	State or Province	Survey Year	# Interviews	Pass-By Trip (%)	Non-Pass-By Trips			Adj Street Peak Hour Volume	Source
					Primary (%)	Diverted (%)	Total (%)		
3.8	Pennsylvania	2005	63	33	—	—	67	—	19
3.8	Pennsylvania	2005	103	77	—	—	23	—	19
3.8	Pennsylvania	2005	34	37	—	—	63	—	19
3.8	Pennsylvania	2005	53	33	—	—	67	—	19
3.8	Pennsylvania	2005	25	12	—	—	88	—	19

APPENDIX H

COAST Bus Schedule & Map

Route 43 Map

Portsmouth • Newington



Ride Information

COAST BUS FARES

Base Cash Fare **$1.50**

All passengers ages 5 and up are required to pay this fare each time they board a COAST bus.

Half-Fare **$ 0.75**

Passengers 65 and older, or passengers with a disability are entitled to pay half the cash fare. Proof of eligibility is required by showing a Medicare card, photo ID with birth date, COAST ADA Paratransit Card, or COAST Half-Fare Card. Please contact COAST to apply for a Half-Fare Card.

Multi-Ride Tickets and Passes

*Available at **www.coastbus.org** or call 603-743-5777, TTY 711.*

Unlimited Monthly Pass **$ 52**

Unlimited rides on COAST Routes for the month.

YOUR RIGHTS

COAST adheres to all Federal regulations regarding Civil Rights. If you need to request an ADA Reasonable Modification/ Accommodation, or if you believe you have been discriminated against or would like to file a complaint under the ADA or Title VI, please contact COAST's Civil Rights Officer at 603-516-0788, TTY 711 or email CivilRights@coastbus.org.

NO SERVICE DAYS

COAST does not operate on the following holidays:

- New Year's Day
- Martin Luther King Jr./ Civil Rights Day
- Memorial Day
- Independence Day
- Labor Day
- Thanksgiving Day
- Christmas Eve Day
- Christmas Day

42 Sumner Drive • Dover, NH 03820

603-743-5777 • TTY 711 • **www.coastbus.org**

This brochure is available in alternative formats upon request.

Bus Schedule & Map 43

COAST

Effective 09.17.22

ROUTE 43

Portsmouth • Newington

Find all of the full COAST schedules online at **coastbus.org**

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City of Portsmouth, New Hampshire

Site Plan Application Checklist

This site plan application checklist is a tool designed to assist the applicant in the planning process and for preparing the application for Planning Board review. The checklist is required to be completed and uploaded to the Site Plan application in the City's online permitting system. A pre-application conference with a member of the planning department is strongly encouraged as additional project information may be required depending on the size and scope. The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all site plan review requirements. Please refer to the Site Plan review regulations for full details.

Applicant Responsibilities (Section 2.5.2): Applicable fees are due upon application submittal along with required attachments. The application shall be complete as submitted and provide adequate information for evaluation of the proposed site development. Waiver requests must be submitted in writing with appropriate justification.

Name of Applicant: Bromley-Portsmouth, LLC & RCQ-Portmsouth, LLC c/o Quincy & Company, Inc. Date Submitted: June 16, 2025

Application # (in City's online permitting): LU-25-93

Site Address: 1465 Woodbury Avenue Map: 216 Lot: Lot 3

Application Requirements			
☑	**Required Items for Submittal**	**Item Location (e.g. Page or Plan Sheet/Note #)**	**Waiver Requested**
☑	Complete application form submitted via the City's web-based permitting program (2.5.2.1**(2.5.2.3A)**	Enclosed	N/A
☑	All application documents, plans, supporting documentation and other materials uploaded to the application form in viewpoint in digital Portable Document Format (PDF). One hard copy of all plans and materials shall be submitted to the Planning Department by the published deadline. **(2.5.2.8)**	Enclosed	N/A

Site Plan Review Application Required Information			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☑	Statement that lists and describes "green" building components and systems. **(2.5.3.1B)**	Enclosed	N/A
☑	Existing and proposed gross floor area and dimensions of all buildings and statement of uses and floor area for each floor. **(2.5.3.1C)**	Site Plan Sheet C-102	N/A
☑	Tax map and lot number, and current zoning of all parcels under Site Plan Review. **(2.5.3.1D)**	Site Plan Sheet C-102	N/A

Site Plan Review Application Required Information			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☑	Owner's name, address, telephone number, and signature. Name, address, and telephone number of applicant if different from owner. **(2.5.3.1E)**	Enclosed Cover Sheet	N/A
☑	Names and addresses (including Tax Map and Lot number and zoning districts) of all direct abutting property owners (including properties located across abutting streets) and holders of existing conservation, preservation or agricultural preservation restrictions affecting the subject property. **(2.5.3.1F)**	Existing Conditions Plan Sheets	N/A
☑	Names, addresses and telephone numbers of all professionals involved in the site plan design. **(2.5.3.1G)**	Cover Sheet	N/A
☑	List of reference plans. **(2.5.3.1H)**	General Notes Sheet G-100 & Existing Conditions Plan Sheets	N/A
☑	List of names and contact information of all public or private utilities servicing the site. **(2.5.3.1I)**	General Notes Sheet G-100	N/A

Site Plan Specifications			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☑	Full size plans shall not be larger than 22 inches by 34 inches with match lines as required, unless approved by the Planning Director.. **(2.5.4.1A)**	Required on all plan sheets	N/A
☑	Scale: Not less than 1 inch = 60 feet and a graphic bar scale shall be included on all plans. **(2.5.4.1B)**	Required on all plan sheets	N/A
☑	GIS data should be referenced to the coordinate system New Hampshire State Plane, NAD83 (1996), with units in feet. **(2.5.4.1C)**	Existing Conditions Plan Sheets	N/A
☑	Plans shall be drawn to scale and stamped by a NH licensed civil engineer. **(2.5.4.1D)**	Required on all plan sheets	N/A
☑	Wetlands shall be delineated by a NH certified wetlands scientist and so stamped. **(2.5.4.1E)**	N/A	N/A
☑	Title (name of development project), north point, scale, legend. **(2.5.4.2A)**	Required on all plan sheets	N/A
☑	Date plans first submitted, date and explanation of revisions. **(2.5.4.2B)**	Required on all plan sheets	N/A
☑	Individual plan sheet title that clearly describes the information that is displayed. **(2.5.4.2C)**	Required on all plan sheets	N/A
☑	Source and date of data displayed on the plan. **(2.5.4.2D)**	Required on all plan sheets	N/A

Site Plan Specifications – Required Exhibits and Data			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☑	**1. Existing Conditions: (2.5.4.3A)** • Surveyed plan of site showing existing natural and built features; • Existing building footprints and gross floor area; • Existing parking areas and number of parking spaces provided; • Zoning district boundaries; • Existing, required, and proposed dimensional zoning requirements including building and open space coverage, yards and/or setbacks, and dwelling units per acre; • Existing impervious and disturbed areas; • Limits and type of existing vegetation; • Wetland delineation, wetland function and value assessment (including vernal pools); • SFHA, 100-year flood elevation line and BFE data, as required.	Existing Conditions Plan Sheets	
☑	**2. Buildings and Structures: (2.5.4.3B)** • Plan view: Use, size, dimensions, footings, overhangs, 1st fl. elevation; • Elevations: Height, massing, placement, materials, lighting, façade treatments; • Total Floor Area; • Number of Usable Floors; • Gross floor area by floor and use.	Site Plan Sheet C-102	
☑	**3. Access and Circulation: (2.5.4.3C)** • Location/width of access ways within site; • Location of curbing, right of ways, edge of pavement and sidewalks; • Location, type, size and design of traffic signing (pavement markings); • Names/layout of existing abutting streets; • Driveway curb cuts for abutting prop. and public roads; • If subdivision; Names of all roads, right of way lines and easements noted; • AASHTO truck turning templates, description of minimum vehicle allowed being a WB-50 (unless otherwise approved by TAC).	Site Plan Sheet C-102	
☑	**4. Parking and Loading: (2.5.4.3D)** • Location of off street parking/loading areas, landscaped areas/buffers; • Parking Calculations (# required and the # provided).	Site Plan Sheet C-102	
☑	**5. Water Infrastructure: (2.5.4.3E)** • Size, type and location of water mains, shut-offs, hydrants & Engineering data; • Location of wells and monitoring wells (include protective radii).	Utilities Plan Sheet C-104	
☑	**6. Sewer Infrastructure: (2.5.4.3F)** • Size, type and location of sanitary sewage facilities & Engineering data, including any onsite temporary facilities during construction period.	Utilities Plan Sheet C-104	

☑	**7. Utilities: (2.5.4.3G)** • The size, type and location of all above & below ground utilities; • Size type and location of generator pads, transformers and other fixtures.	Utilities Plan Sheet C-104	
☐	**8. Solid Waste Facilities: (2.5.4.3H)**		
	• The size, type and location of solid waste facilities.	Site Plan Sheet C-102	
☑	**9. Storm water Management: (2.5.4.3I)** • The location, elevation and layout of all storm-water drainage. • The location of onsite snow storage areas and/or proposed off-site snow removal provisions. • Location and containment measures for any salt storage facilities • Location of proposed temporary and permanent material storage locations and distance from wetlands, water bodies, and stormwater structures.	Grading and Drainage Plan Sheet C-103	
☑	**10. Outdoor Lighting: (2.5.4.3J)** • Type and placement of all lighting (exterior of building, parking lot and any other areas of the site) and photometric plan.	Photometrics Plan	
☑	**11.** Indicate where dark sky friendly lighting measures have been implemented. **(10.1)**	Photometrics Plan	
☑	**12. Landscaping: (2.5.4.3K)** • Identify all undisturbed area, existing vegetation and that which is to be retained; • Location of any irrigation system and water source.	Landscape Plan Sheet	
☑	**13. Contours and Elevation: (2.5.4.3L)** • Existing/Proposed contours (2 foot minimum) and finished grade elevations.	Grading and Drainage Plan Sheet C-103	
☑	**14. Open Space: (2.5.4.3M)** • Type, extent and location of all existing/proposed open space.	Open Space Exhibit	
☑	**15. All easements, deed restrictions and non-public rights of ways. (2.5.4.3N)**	Existing Conditions Plan Sheets	
☑	**16. Character/Civic District (All following information shall be included): (2.5.4.3P)** • Applicable Building Height (10.5A21.20 & 10.5A43.30); • Applicable Special Requirements (10.5A21.30); • Proposed building form/type (10.5A43); • Proposed community space (10.5A46).	Site Plan Sheet C-102	
☑	**17. Special Flood Hazard Areas (2.5.4.3Q)** • The proposed development is consistent with the need to minimize flood damage; • All public utilities and facilities are located and construction to minimize or eliminate flood damage; • Adequate drainage is provided so as to reduce exposure to flood hazards.	N/A	

Other Required Information			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☑	Traffic Impact Study or Trip Generation Report, as required. **(3.2.1-2)**	N/A	
☑	Indicate where Low Impact Development Design practices have been incorporated. **(7.1)**	Grading and Drainage Plan Sheet C-103	
☑	Indicate whether the proposed development is located in a wellhead protection or aquifer protection area. Such determination shall be approved by the Director of the Dept. of Public Works. **(7.3.1)**	N/A	
☑	Stormwater Management and Erosion Control Plan. **(7.4)**	Enclosed	
☑	Inspection and Maintenance Plan **(7.6.5)**	Enclosed	

Final Site Plan Approval Required Information			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☑	All local approvals, permits, easements and licenses required, including but not limited to: • Waivers; • Driveway permits; • Special exceptions; • Variances granted; • Easements; • Licenses. **(2.5.3.2A)**	Cover Sheet	
☑	Exhibits, data, reports or studies that may have been required as part of the approval process, including but not limited to: • Calculations relating to stormwater runoff; • Information on composition and quantity of water demand and wastewater generated; • Information on air, water or land pollutants to be discharged, including standards, quantity, treatment and/or controls; • Estimates of traffic generation and counts pre- and post-construction; • Estimates of noise generation; • A Stormwater Management and Erosion Control Plan; • Endangered species and archaeological / historical studies; • Wetland and water body (coastal and inland) delineations; • Environmental impact studies. **(2.5.3.2B)**	Enclosed	
☑	A document from each of the required private utility service providers indicating approval of the proposed site plan and indicating an ability to provide all required private utilities to the site. **(2.5.3.2D)**	The applicant has met with Eversource to get a will serve letter.	

Final Site Plan Approval Required Information			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☑	A list of any required state and federal permit applications required for the project and the status of same. **(2.5.3.2E)**	Cover Sheet	
☑	A note shall be provided on the Site Plan stating: "All conditions on this Plan shall remain in effect in perpetuity pursuant to the requirements of the Site Plan Review Regulations." **(2.5.4.2E)**	Site Plan Sheet C-102	N/A
☑	For site plans that involve land designated as "Special Flood Hazard Areas" (SFHA) by the National Flood Insurance Program (NFIP) confirmation that all necessary permits have been received from those governmental agencies from which approval is required by Federal or State law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334. **(2.5.4.2F)**	N/A	
☑	Plan sheets submitted for recording shall include the following notes: a. "This Site Plan shall be recorded in the Rockingham County Registry of Deeds." b. "All improvements shown on this Site Plan shall be constructed and maintained in accordance with the Plan by the property owner and all future property owners. No changes shall be made to this Site Plan without the express approval of the Portsmouth Planning Director." **(2.13.3)**	Site Plan Sheet C-102	N/A

Applicant's Signature: _____ **Date:** 7/30/25


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